

ITALIAN ENDEMIC CARYOPHYLLACEAE: A REVIEW

D. IAMONICO

Department PDTA, Sapienza University of Rome, Via Flaminia 72,
00196 - Rome, Italy - d.iamonico@yahoo.it

(Recibido el 5 de Octubre de 2013)

Resumen. Se analizan los taxones endémicos de Italia pertenecientes a la familia Caryophyllaceae, con un total de 92 taxones (aproximadamente el 24.5% del total de Caryophyllaceae italianas), pertenecientes a 13 géneros. Los generos que tienen el mayor número de taxones son *Dianthus* (27 taxones que representan el 29.35% del total de los endemismos), *Silene* (26, 28.26%) y *Cerastium* (10, 10.87%). Los taxones endémicos incluidos en *Dianthus* representan aproximadamente el 60% del total de los taxones italianos de *Dianthus*, seguido de *Moheringia* L. (42,86%), *Herniaria* L. (36.36%), *Gypsophyla* L. (33.33%), *Scleranthus* L. (30%), *Silene* (26%), *Cerastium* (23.26%) y *Minuartia* L. (21.43%). La mayor parte de los taxones se distribuye en el centro-sur de Italia (55.49%), y en Sicilia y Cerdeña (28.14%), mientras los demás taxones se encuentran en el norte (17.37%). La flora de la isla Cerdeña incluye el mayor número de taxones endémicos (26); le siguen en número cuatro regiones que tienen más de 10 taxones [Sicilia (21 taxones), Calabria and Abruzzo (14), Campania (12), y Lazio (11)]. Se indican los tipos de 68 nombres, mientras que los otros 25 necesitan la designación de un lectotipo o un neotipo. La tipificación de dos de los nombres (*Cerastium scaranii* y *Dianthus paniculatus*) ha sido revisada y se han designado neotipos sobre pliegos conservado en los herbarios M y NAP. Se aporta un cuadro sinóptico que incluye los nombres correctos, basiónimos, tipos, cuando han sido designados, y distribución a nivel regional. Se incluye un cuadro con 32 nombres de posibles taxones endémicos de valor taxonómico dudoso.

Palabras clave: Flora de Italia, riqueza de endemismos, tipificación.

Summary. *Italian endemic Caryophyllaceae: a review.* A review of the Italian endemic Caryophyllaceae is presented. The list includes 92 taxa (about the 24.5% of the Italian Caryophyllaceae) which belong to 13 genera. The richest genera are *Dianthus*, *Silene*, and *Cerastium*, with 27 (29.35% of the total Italian endemics Caryophyllaceae), 26 (28.26%), and 10 (10.87%) taxa respectively. The endemics *Dianthus* represents about the 60% of the total Italian *Dianthus* taxa, followed by *Moheringia* L. (42.86%), *Herniaria* L. (36.36%), *Gypsophyla* L. (33.33%), *Scleranthus* L. (30%), *Silene* (26%), *Cerastium* (23.26%), and *Minuartia* L. (21.43%). Most taxa occur in central and southern Italy (55.49%), and in Sicily and Sardinia (28.14%), while the remaining ones occur in northern Italy (17.37%). At regional level, the Sardinia flora comprises the higher number of endemics (26); four regions have floras with more than 10 endemic taxa [Sicily (21 taxa), Calabria and Abruzzo (14), Campania (12), and Lazio (11)]. 65 taxa have already been typified, while the other 27 need the designation of one lecto- or neotype. The typification of two names (*Cerastium scaranii*, and *Dianthus paniculatus*) was here revised and the names neotypified on specimens kept in M, and NAP. A table with 32

potentially endemic taxa of doubtful taxonomic value is also included. A comprehensive synoptical table including accepted names, basynoms, types, when designated, and regional distribution is include.

Keywords: Flora of Italy, endemic richness, typification.

INTRODUCTION

Caryophyllaceae Juss. is a family of about 2200 species (70-86 genera) mainly distributed in the Holoartic region. The Mediterranean area, one of the world biodiversity hotspot, in which about 13.000 endemic taxa have been recorded (MYERS & al., 2000), is an important center of diversity of this family.

As part of the research work within the initiative “*Italian Loci Classici Census*” (DOMINA & al., 2012) launched in 2010 under the auspices of the Italian Botanic Society (see e.g. IAMONICO & al., 2011; IAMONICO 2012, 2013a; IAMONICO & REVEAL, 2012; IAMONICO & PERUZZI, 2012) a review of the Italian endemic *Caryophyllaceae* is here presented.

MATERIAL AND METHODS

The nomenclature mainly follows MARHOLD (2011). Specific literature is also analyzed.

The taxa are listed (Table 3) in alphabetical order, each including: accepted name, basynonym (if present), type indication and occurrence in Italy at regional level (abbreviations according to CONTI & al., 2005).

Concerning the typifications of *Cerastium scaranii* and *Dianthus paniculatus*, the Herbaria MPU, P, PAL, and RO were checked (acronyms according to THIERS, 2011).

RESULTS AND DISCUSSION

The Italian Flora includes 376 *Caryophyllaceae* taxa (34 genera), of which 92 (belonging to 13 genera) are endemics (CONTI & al., 2005; PERUZZI *et al.*, in prep.), and representing about the 24% of the total Italian *Caryophyllaceae*. At genus level, the *Caryophyllaceae* is the sixth richest family in Italy (PERUZZI, 2010), while at species level it is the third one (PERUZZI & al., 2012).

Dianthus L. and *Silene* L. comprise the higher number of endemics, with 27 and 26 taxa respectively (about the 29.35% and 28.26% of the total endemics *Caryophyllaceae*). *Cerastium* L. has 10 taxa (10.87%), while the other 10 genera

have less than 10 taxa. In terms of percentage, the endemics *Dianthus* represents about the 60% of the total Italian *Dianthus* taxa, followed by *Moehringia* L. (42.86%), *Herniaria* L. (36.36%), *Gypsophyla* L. (33.33%), *Scleranthus* L. (30%), *Silene* (26%), *Cerastium* (23.26%), and *Minuartia* L (21.43%); for the other genera the percentages are less than 20% (Table 1, Fig. 1).

Genus	Number of taxa	Endemic taxa per total endemics (%)	Endemic taxa per genus per total Italian taxa (%)
Dianthus L.	27	29.35	60.00
Silene L.	26	28.26	26.00
Cerastium L.	10	10.87	23.26
Moehringia L.	6	6.52	42.86
Minuartia L.	6	6.52	21.43
Herniaria L.	4	4.35	36.36
Scleranthus L.	3	3.26	30.00
Arenaria L.	2	2.17	18.18
Gypsophila L.	2	2.17	33.33
Sagina L.	2	2.17	20.00
Spergularia (Pers.) J.Presl & C.Presl	2	2.17	20.00
Saponaria L.	1	1.09	12.50
Stellaria L.	1	1.09	7.14
TOTAL	92		

Table 1. Number of taxa per genus and percentages of the Italian endemic *Caryophyllaceae*.

The 54.49% of the endemics occur in central and southern Italy, the 28.14% in Sicily and Sardinia, the 17.37% in northern regions. At regional level, the Sardinia flora includes the higher number of endemics (26); four regional floras have more than 10 taxa [Sicily (21 taxa), Calabria and Abruzzo (14), Campania (12), and Lazio (11)] (Fig. 2). Other occurrences are doubts or considered as introduced taxa (Table 2).

The older name was described by LINNAEUS (1753) in *Species Plantarum* (*Cerastium tomentosum*), while the most recent one (*Silene kemoniana*) by Brullo & al., (2012) from Sicily. If we consider periods of 20 years (Fig. 3), there was a decreasing in publication of new taxa during the period 1886-1965, while the number is high in the first half of the XIX century (1753-1865, with

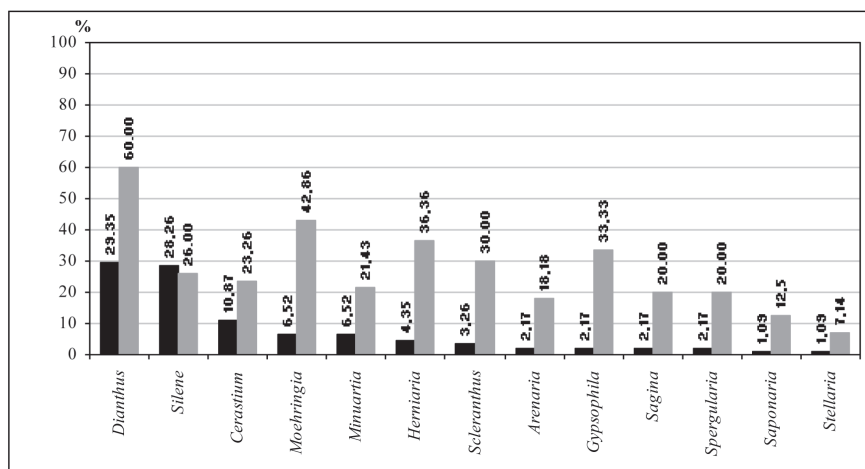


Fig. 1. Italian *Caryophyllaceae* endemic taxa: percentage of endemic taxa per genus (black columns), and of endemic taxa per genus refer to the total Italian taxa (grey columns).

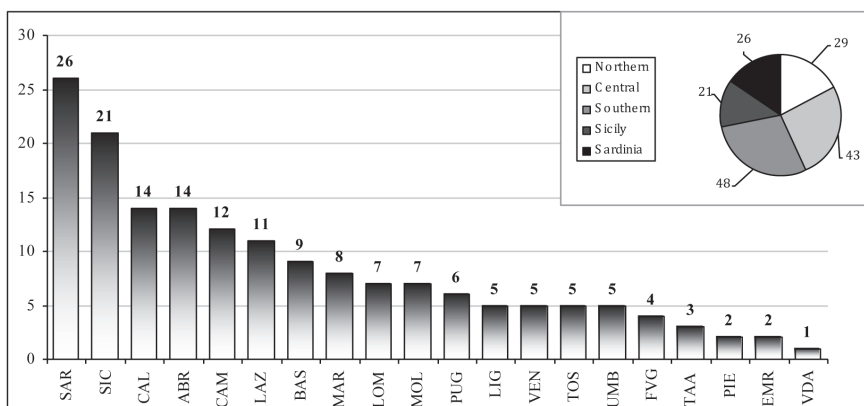


Fig. 2. Number of Italian endemic *Caryophyllaceae* per region (A) and zones (B).

a total of 28 taxa) and in the last sixth years (1966-2013, with 34 taxa; 20 new taxa during the period 1986-2005 were described). Since 1753, by looking at the cumulative curve obtained plotting the number of taxa against years (Fig. 4), it is evident that taxonomic studies on Italian endemic *Caryophyllaceae* were subject to a constant increase up to 1985. Then (see the vertical line in the Fig. 4), the description of new endemic taxa increased again up to today, with an exponential-like behaviour.

Taxon	Regions
<i>Arenaria bertolonii</i> Fiori & Paol.	SIC(?)
<i>Cerastium lacaitae</i> Barberis, Bechi & Miceli ¹	SIC(?)
<i>Cerastium scarani</i> Ten.	UMB(?)
<i>Cerastium tomentosum</i> L. ²	PIE(A), TAA(A), VEN(A), FVG(A), EMR(A)
<i>Dianthus guliae</i> Janka	ABR(?)
<i>Dianthus furcatus</i> Balb.	PIE(?)
<i>Gypsophyla papillosa</i> Porta	TAA(?)
<i>Minuartia laricifolia</i> (L.) Schinz & Thell	UMB(?)
<i>Silene cattariniana</i> Ferrarini & Cecchi ¹	UMB(?)
<i>Silene echinata</i> Otth	LAZ(?)
<i>Silene turbinata</i> Guss.	SIC(?)

Table 2. Endemic Italian *Caryophyllaceae* (alphabetical order): doubtful recorded taxa (?) and aliens (A). Regional names abbreviations follow CONTI & al. (2005).

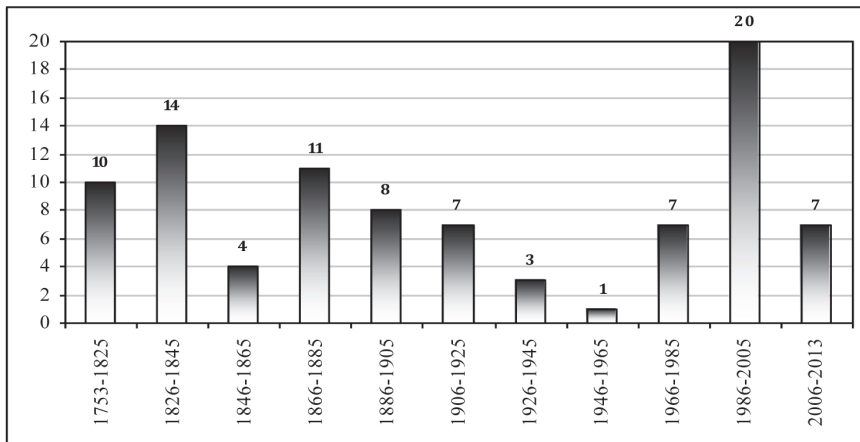


Fig. 3. Number of new published Italian endemic *Caryophyllaceae* (axis Y) during the time (axis X; time range = 20 years).

65 taxa appear typified (39 holotypes, and 26 lectotypes), while the remaining ones (27) need the designation of lecto- or neotype. Among the typified taxa, the names *Cerastium scaranii* (investigated by BARBERIS & al., 1994), and *D. paniculatus* (investigated by BACCHETTA & al., 2010) need clarification.

Concerning *C. scaranii*, BARBERIS & al. (1994) considered the following six herbarium specimens:

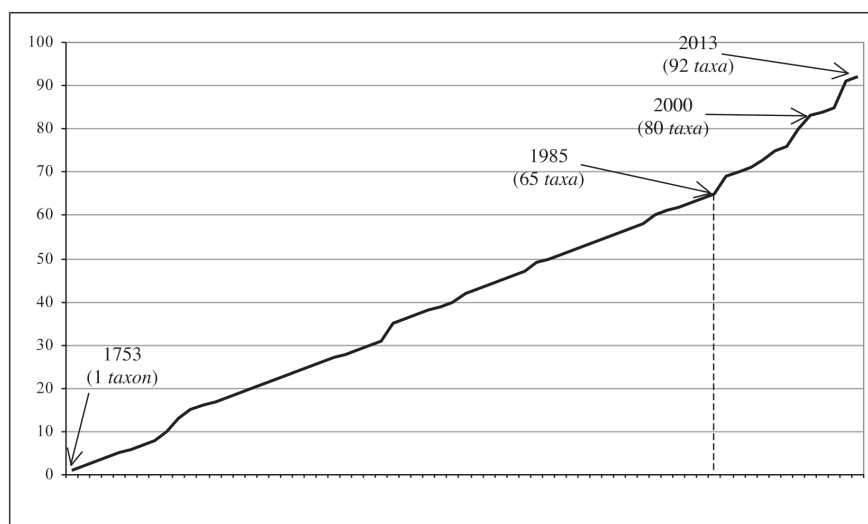


Fig. 4. Cumulative curve of Italian endemics *Caryophyllaceae*, obtained plotting the number of taxa against years.

- 1) B: “*Cerastium Scaranii* Ten. In pascuis montosis Lucania Ten.”;
- 2) BM: “*Cerastium Scaranii* Ten. In Sannii herbidis montosis. Tenore 1837”;
- 3) FI: “*C. Scaranii* Ten. in monitibus Sannii Tenore. Da Tenore in marzo 1844”;
- 4) NAP, one sheet with three labels: “*Cerastium scarani* Ten. A. strictum arvense 47 Scarani”, “*C. Scarani*”, “*C. scaranii* Tenore!! Loc. Matese Legit Scarano! Grande 1911”;
- 5) NCY: “*Cerastium Scaranii* Ten. In montibus Sannii. Aut du Tenore...1840”.

Concerning the herbaria NAP and B, the authors stated: “We excluded the specimens in NAP and in B from candidacy for typification, for the following reasons: the specimen in NAP is incomplete, lacking ripe capsules, and the collecting date and place are wanting on the label; it is impossible to ascertain whether the collecting place (Matese) and collector (Scarano) added by Grande rest on reliable information; the specimen in B disagrees with the protologue in some characters”. The lacking of ripe capsules (exsiccatum at NAP) is not an element in conflict with the protologue, so it is not a reason to exclude the specimens from the typification (see e.g., IAMONICO, 2013c), while the exsiccatum from B is in real conflict with the protologue and it cannot be eligible as lectotype according to the authors. In every case, the missing of both date and collection locality does not allow to treat these exsiccata as part of the original material. Unfortunately none of the specimens listed by BARBERIS &

al. (1994) include the date of collection, so we cannot be sure that are part of the original material. As consequence they are not eligible lectotype. Since no further material was traced [we also found material in the herbaria (not cited by BARBERIS & al., 1994) MPU, P, PAL, RO], a neotype has to be designated (Art. 9.7 of the ICN, McNEILL & al., 2012). We here designate the exsiccata at M as the neotype of the name *Cerastium scaranii* (see also the Table 3).

Cerastium scaranii Ten., *Prodr. Fl. Nap.* 1: 26 (1811). **Neotype** (here designated): Italy, Campania, In Sannio, *sine die*, Tenore *s.n.* (M).

As regard the name *Dianthus paniculatus*, BACCHETTA & al. (2010) lectotyped it on a specimen kept in and PAL (“*Dianthus paniculatus* Lojac. (1906, p. 188), non *Güldenst.* (1787, p. 68). *Type: in rupis umbrosis calcareis Busambra, s.d., Lojaco* (lectotype designated here, PAL!)”). However, the date of collection is lacking, so it is not sure that it is part of the original material and, as consequence, it is not eligible lectotype. According to the Art. 9.7 of the ICN (McNEILL & al., 2012) neotype has to be designated. We here designated the same specimen chosen by BACCHETTA & al. (2010) as the neotype of the name *Dianthus paniculatus*.

Dianthus paniculatus Lojac., *Malpighia* 20: 188 (1906). **Neotype** (here designated): Italy, Sicily, in rupis umbrosis calcareis Busambra, *sine die*, Lojaco *s.n.* (PAL).

The list of the Italian endemic *Caryophyllaceae* follows (Table 3).

Finally, the careful literature examination allowed to highlight 32 names referred to taxa potentially endemic for Italy, that were not or rarely cited in the recent Italian floras/works. These names are to be considered provisional and their identities (and, as consequence, their endemic status) uncertain. Further studies need (see Table 4).

CONCLUSIONS

The Italian flora includes and high number of endemics *Caryophyllaceae* (92; the taxa listed in the Table 4 are excluded), representing about the 7.0% of the Italian endemics [1369 (PERUZZI & al., in prep)].

Several taxa needs further studies from nomenclatural (27 names are not typified), and taxonomical (especially those listed in the Table 4) points of view.

Acknowledgements. Thanks to L. Peruzzi (University of Pisa) for the useful discussions.

Accepted name	Basionym	Type	Occurrence in Italy
<i>Arenaria bertolonii</i> Fiori. & Paol., Fl. Anal. d'It. 1: 346. 1898, <i>nom. nov.</i>	<i>Stellaria saxifraga</i> Bertol., Pl. Ital. Rar. 3: 55. 1810, non Friv. 1836	Lectotype (designated by IAMONICO, 2013b): Italy, Toscana, Sagro occidentali alpium Apuanorum l. d. poggio della putana in fissuris rupium, 01.VIII.1808, <i>A. Bertoloni s.n.</i> (BOLO)	LIG, Central and Southren Italy; doubtfully recorded in SIC
<i>Arenaria huteri</i> A.Kern., Corr. Österr. Bot. Z. 22: 368. 1872	–	Lectotype (designated by IAMONICO, in press): Italy, Friuli-Venezia Giulia, Venetien, in Canale di Cimolais, 10.VII.1872, <i>R. Huter 61466</i> (WU)	FVG, TAA, VEN
<i>Cerastium apuanum</i> Parl., Nuov. Giorn. Bot. 6: 69. 1875	–	Lectotype (designated by BECHI & al., 1992): Italy, Tuscany, Alpi Apuane alle svolte di Levigliani, 25 maggio 1871, <i>F. Parlatore s.n.</i> (FI)	TOS
<i>Cerastium granulatum</i> (Huter, Porta & Rigo) Chiov., Nuovo Giorn. Bot. Ital., n. s. 30: 53. 1923	<i>Cerastium campaulatum</i> Viv. var. <i>granulatum</i> Huter, Porta & Rigo, Nuovo Giorn. Bot. Ital. 11: 267. 1879	Not designated	CAM, BAS, CAL
<i>Cerastium lacaitae</i> Barberis, Bechi & Miceli, Flora Medit. 4: 227 (1994)	–	Holotype (BARBERIS & al., 1994): Italy, Campania, Melvedere di M. Faito, Croce dell'Eremita, 1020 m a.s.l., 20.VI.1991, <i>G. Barberis, N. Bechi & V. La Valva, s.n.</i> (GE; isotypes in FI, NAP, PI)	CAM, PUG, CAL, SIC
<i>Cerastium palustre</i> Moris, Mem. Accad. Torino 38: 28. 1835	–	Lectotype (designated by DIANA, 1980): Italy, Sardinia, "Cerastiumcampaulatum Vivo/in humidis Macomer/majo", <i>sine die</i> , <i>Moris s.n.</i> (SASSA)	SAR

Table 3. Checklist of the endemic Italian *Caryophyllaceae* (alphabetical order). Regional names abbreviations follow Conti & al. (2005).

Accepted name	Basyonym	Type	Occurrence in Italy
<i>Cerastium pospichalii</i> Soldano & F.Conti, Annot. Checkl. Italian Vasc. Fl.: 17. 2005, <i>nom.</i> <i>nov.</i>	<i>Cerastium spurium</i> Posp., Fl. Österr. Küstenl., 1 : 443. 1879, non Biroli ex Colla 1833	Not designated	FVG
<i>Cerastium scaranii</i> Ten., Prodr. Fl. Nap. 1: 26. 1811	–	Neotype (here designated): Italy, Campania, In Sannio, <i>sine die</i> , <i>M. Tenore, s.n.</i> (M)	Central and Southern Italy, excepting for PUG, SIC, SAR; doubtfully recorded in UMB
<i>Cerastium supramontanum</i> Arrigoni, Boll. Soc. Sarda Sci. Nat. 23: 213. 1984	–	Holotype (ARRIGONI, 1984): Italy, Sardinia, Urzulei, Costa Silana, Rupi sotto Punta S'Iscalea, esp. Est, m 900-1000, calcarei giurassici, 25.V.1968, <i>P.V.</i> <i>Arrigoni & C. Ricceri s.n.</i> (FI)	SAR
<i>Cerastium thomasii</i> Ten., Fl. Neapol. Prodr. App. 4: 21. 1823	–	Lectotype (designated by BECHI, 1998): Italy, vetta di Mt. Corno (NAP)	LAZ, ABR
<i>Cerastium tomentosum</i> L., Sp. Pl. 1: 440.1753	–	Lectotype (designated by BUSCHMANN, 1938): Spain, Habitat in Granada, <i>sine die</i> , <i>G.A. Scopoli 603.27</i> (LINN)	Central and Southern Italy, excepting for PUG and SAR. Alien in Northern Italy (PIE, TAA, VEN, FVG, EMR)
<i>Cerastium utriense</i> Barberis, Webbia 42(2): 154. 1988	–	Holotype (BARBERIS, 1988): Italy, Piemonte, pendici M. Tobbio, a monte della strada tra le Capanne di Marcarolo e Voltaggio, ca. 550 m, esposizione NW, serpentinoscisti, 18.VIII.1987, <i>M. Macciò</i> (GE; isotype in FI)	PIE, LIG
<i>Dianthus brachycalyx</i> Huet ex Bacch., Brullo, Casti & Giusso, Nord. J. Bot. 28: 142. 2010	-	Holotype (BACCHETTA & al., 2010): Italy, Abruzzo, in elatis ad rupes montis Corno, 1800-2000 m a.s.l., Aprutii, 27.VIII.1856, <i>Huet</i> <i>du Pavillon 278</i> (G)	Central (LAZ, ABR, MOL) and Southern Italy (CAM, BAS, CAL)

Table 3. Continuation.

Accepted name	Basionym	Type	Occurrence in Italy
<i>Dianthus brutius</i> Brullo, Scelsi & Spamp. subsp. <i>brutius</i> , Portugal. Acta Biol. 19(1-4): 304. 2000	-	Holotype (BRULLO & al., 2000): Italy, Calabria, Aspromonte, Valle Torrente Menta, Contrada Scala, 21.VII.1994, S. Brullo, F. Scelsi & G. Spampinato s.n. (CAT; isotypes in CAT, FI)	CAL
<i>Dianthus brutius</i> Brullo, Scelsi & Spamp. subsp. <i>pentadactyli</i> Brullo, Scelsi & Spamp., Portugal. Acta Biol. 19(1-4): 306. 2000	-	Holotype (BRULLO & al., 2000): Italy, Calabria, Aspromonte, Rupi di Pentadattilo, 18.6.1992, F. Scelsi & G. Spampinato s.n. (CAT; isotypes in CAT, FI)	CAL
<i>Dianthus busambrae</i> Soldano & F.Conti, Annot. Checkl. Italian Vasc. Fl.: 18. 2005, <i>nom. nov.</i>	<i>Dianthus paniculatus</i> Lojac., Malpighia 20 : 188. 1906, non Gldenst. 1787	Neotype (here designated): Italy, Sicily, in rupis umbrosis calcareis Busambra, <i>sine die</i> , M. Lojacocono s.n. (PAL)	SIC
<i>Dianthus carthusianorum</i> L. subsp. <i>tenorei</i> (Lacaita) Pignatti, Giorn. Bot. Ital. 111:46. 1977	<i>Dianthus carthusianorum</i> L. var. <i>tenorei</i> Lacaita, Nuovo Giorn. Bot. Ital. n.s. 34: 189-190. 1927	Not designated	MAR, UMB, LAZ, ABR, MOL, CAM, BAS, CAL
<i>Dianthus cyathophorus</i> Moris, Enum. sem. r. horti bot. Taurin.: 32. 1852	-	Lectotype (designated by ARRIGONI, 2005): Italy, Sardinia, nelle fessure delle rupi monti di Dorgale, VI.1852, <i>Lisa s.n.</i> (TO)	SIC, SAR
<i>Dianthus furcatus</i> Balb. subsp. <i>dissimilis</i> (Burnat) Pignatti, Giorn. Bot. Ital. Nov. Ser., 107: 209. 1973	<i>Dianthus furcatus</i> Balb. var. <i>dissimilis</i> Burnat, Fl. Alpes Marit. 3: 230.1892	Not designated	Doubtfully recorded in PIE
<i>Dianthus furcatus</i> Balb. subsp. <i>lereschii</i> (Burnat) Pignatti, Giorn. Bot. Ital. Nov. Ser., 107: 209. 1973	<i>Dianthus furcatus</i> Balb. var. <i>lereschii</i> Burnat, Fl. Alpes Marit. 3: 230.1892	Not designated	VDA, PIE, LIG
<i>Dianthus gasparinii</i> Guss., Fl. Sic. Syn.: 479. 1843	-	Lectotype (designated by BACCHETTA & al., 2010): Italy, Sicily, in collibus aridis argilloso calcarei colline di Polizzi, <i>Gasparinii s.n.</i> (NAP)	SIC

Table 3. Continuation.

Accepted name	Basyonym	Type	Occurrence in Italy
<i>Dianthus genargentus</i> Bacch., Brullo, Casti & Giusso, Nord. J. Bot. 28: 145. 2010	-	Holotype (BACCHETTA & al., 2010): Italy, Sardinia, Gennargentu, Bruncu Spina-Desulo, 25.VI.2003, G. Bacchetta & M. Casti s.n. (CAT; isotypes in CAG, CAT, FI).	SAR
<i>Dianthus graminifolius</i> C.Presl., Fl. Sicul., 1: 147. 1826	-	Lectotype (designated by BACCHETTA & al., 2010): Italy, Sicily, in apricis montis Cucii ad Panormum, VII.1817, C. Presl s.n. (PRC)	SIC
<i>Dianthus guliae</i> Janka, Il Barth. 3: 422. 1874	-	Lectotype (designated by PERUZZI & GARGANO, 2006): Italy, Campania, in campestribus dumosis in ter Eboli et fl. Sele non procul a Neapoli, 18.VI.1874, Janka s.n. (BP; isolectotypes in BP, CL)	CAM, CAL; old recorded in ABR, and TOS
<i>Dianthus ichnusae</i> Bacch., Brullo, Casti & Giusso subsp. <i>ichnusae</i> , Nord. J. Bot. 28: 146. 2010	-	Holotype (BACCHETTA & al., 2010): Italy, Sardinia, Montiferru, Badde Urbara, Santulussurgiu, 20.VI.2004, M. Casti s.n. (CAT; isotypes in CAG, CAT, FI)	SAR
<i>Dianthus ichnusae</i> Bacch., Brullo, Casti & Giusso subsp. <i>toddei</i> Bacch., Brulli, Casti & Giusso, Nord. J. Bot. 28: 147. 2010	-	Holotype (BACCHETTA & al., 2010): Italy, Sardinia, M. Rasu, 30.V.2002, S. Brullo, M. Casti & G. Giusso s.n. (CAT; isotypes in CAG, CAT, FI)	SAR
<i>Dianthus insularis</i> Bacch., Brullo, Casti & Giusso, Nord. J. Bot. 28: 156. 2010	-	Holotype (BACCHETTA & al., 2010): Italy, Sardinia, Tacco di Ulassai, 6.VII.2000, G. Bacchetta, S. Brullo, M. Casti & G. Giusso s.n. (CAT; isotypes in CAG, CAT, FI)	SAR
<i>Dianthus japgicus</i> Bianco & Brullo, Braun-Blanquetia 2: 31. 1988	-	Holotype (BACCHETTA & al., 2010): Italy, Puglia, Italia meridionale, Capo di Leuca, 10.VII.1978, S. Brullo s.n. (CAT)	PUG

Table 3. Continuation.

Accepted name	Basyonym	Type	Occurrence in Italy
<i>Dianthus minae</i> Mazzola, Raimondo & Ilardi, Bocconea 17: 307. 2004		Holotype (MAZZOLA & al., 2004): Italy, Sicily, Castelbuono, Passo Scuro, carbonate cliff, 700 m a.s.l., 04.VI.1990, <i>Raimondo et al.</i> (PAL, isotypes in PAL, G, SEV, B, RNG, CAT)	SIC
<i>Dianthus morisianus</i> Vals., Boll. Soc. Sarda Sci. Nat. 24: 333. 1985	–	Holotype (VALSECCHI, 1985) Portixeddu: dune interne, 4.VI.1985, <i>Valsecchi, Villa, Filigheddu & Bagella s.n.</i> (SS; isotypes in SS, FI)	SAR
<i>Dianthus mossanus</i> Bacch. & Brullo, Portugal. Acta Biol. 19(1-4): 296. 2000	–	Holotype (designated by BACCHETTA & BRULLO, 2000): Italy, Sardinia, Cagliari, Capoterra, S'Enna e Sa Craba, Conca d'Oru, 500-650 m a.s.l., graniti e metaquarziti, <i>G. Bacchetta & S. Brullo s.n.</i> (CAT; isotypes in CAG, CAT, FI)	SAR
<i>Dianthus oliastreae</i> Bacch., Brullo, Casti & Giusso, Nord. J. Bot. 28: 171. 2010	–	Holotype (BACCHETTA & al., 2010): Italy, Sardinia, Gairo, 28.V.2002, <i>S. Brullo, M. Casti & G. Giusso s.n.</i> (CAT; isotypes in CAG, CAT, FI)	SAR
<i>Dianthus rupicola</i> Biv. subsp. <i>aeolicus</i> (Lojac.) Brullo & Minissale, Inform. Bot. Ital. 33(2): 539. 2002	<i>Dianthus aeolicus</i> Lojac., Fl. Sic. 1(1): 163.1888	Holotype (LOJACONO POJERO, 1888): Italy, Sicily, Lipari, 28.4.1877, <i>M. Lojaccono s.n.</i> (PAL)	SIC
<i>Dianthus rupicola</i> Biv. subsp. <i>lopadusanus</i> Brullo & Minissale, Inform. Bot. Ital. 33(2): 542. 2002	–	Holotype (BRULLO & MINISSALE, 2002): Italy, Sicily, Lampedusa, Rupi costiere presso Vallone dell'Acqua, 14.4.2000, <i>S. Brullo s.n.</i> (CAT)	SIC
<i>Dianthus sardous</i> Bacch., Brullo, Casti & Giusso in Angiolini, Feddes Rep. 116: 271. 2005	–	Holotype (BACCHETTA & al., 2010): Italy, Sardinia, Discariche di S. Giovanni di Bindua (Iglesias), 6.VI.2002, <i>G. Bacchetta, S. Brullo, M. Casti & G. Giusso s.n.</i> (CAT; isotypes in CAT, CAG, FI)	SAR

Table 3. Continuation.

Accepted name	Basyonym	Type	Occurrence in Italy
<i>Dianthus tarentinus</i> Lacaita in Fiori A. & Béguinot A., Nuovo Giorn. Bot. Ital., n.s., 18: 511. 1911	–	Lectotype (designated by BACCHETTA & al., 2010): Italy, Puglia, presso la costa d'Otranto, IX.1885, <i>Groves s.n.</i> (FI)	PUG
<i>Dianthus virgatus</i> Pasquale, Ann. Acc. Asp. Nat., ser. 3, 2: 4. 1864	-	Lectotype (designated by BACCHETTA & al., 2010): Italy, Calabria, Grotteria di Calabria, 1864, <i>Pasquale s.n.</i> (NAP)	CAL
<i>Dianthus vulturius</i> Guss. & Ten. subsp. <i>vulturius</i> , Index Sem. Horti Neap. 1837: 3. 1837	-	Lectotype (designated by BRULLO & al., 2000): Italy, Basilicata, M. Vulture, ad Pizzo S. Michele, praterie elevate del Vulture, 18.VII.1936, <i>M. Tenore. s.n.</i> (NAP)	ABR, MOL, CAM, PUG, BAS
<i>Dianthus vulturius</i> Guss. & Ten. subsp. <i>aspromontanus</i> Brullo, Scelsi & Spamp., Portugal. Acta Biol. 19(1-4): 310. 2000	-	Holotype (BRULLO & al., 2000): Italy, Calabria, Aspromonte, Rupi presso Montebello Ionico, 15.V.1990, <i>F. Scelsi & G. Spampinato s.n.</i> (CAT; isotypes in CAT, FI)	CAL
<i>Gypsophila arrostii</i> Guss. subsp. <i>arrostii</i> , Pl. Rar.: 160. 1826	-	Not designated	PUG, BAS, CAL, SIC
<i>Gypsophila papillosa</i> Porta, Atti Imp. Regia Accad. Rovereto ser. 3, 11(2): 1. 1905	-	Not designated	VEN, and doubtfully recorded in TAA
<i>Herniaria bornmuelleri</i> Chaudhri, Meded. Bot. Mus. Herb. Rijks Univ. Utrecht 285: 325. 1968	-	Holotype (CHAUDHRI, 1968): Italy, Abruzzo, la Majella, c. 2200 m, 26.VIII.1924, <i>Bornmüller 70</i> (B)	ABR
<i>Herniaria fontanesii</i> J.Gay subsp. <i>empedocleana</i> (Lojac.) Brullo, Giorn. Bot. Ital. 114(1-2): 46. 1980	<i>Herniaria empedocleana</i> Lojac., Naturalista Sicil. 3: 284. 1884	Not designated	SIC

Table 3. Continuation.

Accepted name	Basionym	Type	Ocurrence in Italy
<i>Herniaria hirsuta</i> L. subsp. <i>aprutia</i> Chaudhri, Meded. Bot. Mus. Herb. Rijks Univ. Utrecht 285: 340. 1968	-	Holotype (CHAUDHRI, 1968): Italy, Abruzzo, Chieti, in arvis, c. 100 m, 29.VI.1872, <i>S. Sommier</i> <i>s.n.</i> (FI)	ABR
<i>Herniaria litardierei</i> (Gamisans) Greuter & Burdet, Willdenowia 12: 188. 1981	<i>Herniaria latifolia</i> Lapeyr. subsp. <i>litardierei</i> Gamisans, Candollea 36: 6. 1981	Holotype (GAMISANS, 1981): France, Corse, massif du Rotondo, Punta Lattiniccia, versant E., rocailles siliceuses, 2200 m, 4.VIII.1969, <i>J. Gamisans</i> <i>1808</i> (G)	SAR
<i>Minuartia glomerata</i> (M.Bieb.) Degen subsp. <i>trichocalycina</i> (Ten. & Guss.) F.Conti, Willdenowia 27(1-2): 75. 1997	<i>Arenaria</i> <i>trichocalycina</i> Ten. & Guss. in Tenore, Syll. Pl. Fl. Neapol., App. 4: 16. 1835	Lectotype (designated by CONTI, 1997): Italy, Abruzzo, Piano di Cinquemiglia, presso la chiesa della Madonna della Portella, 24.7.1834, <i>M.</i> <i>Tenore & G. Gussone s.n.</i> (NAP)	ABR
<i>Minuartia graminifolia</i> (Ard.) Jáv. subsp. <i>graminifolia</i> , Sched. Fl. Hung Exsicc. 2: 22. 1914	<i>Arenaria graminifolia</i> Ard., Animadv. Bot. Specim. Alt.: 25. 1764	Lectotype (designated by CONTI & SANTANGELO, 2001): Italy, <i>sine die</i> , Herb. LINN No. 585.51 (LINN)	FVG, VEN
<i>Minuartia graminifolia</i> (Ard.) Jáv. subsp. <i>rosani</i> (Ten.) Mattf., Bot. Jahrb. Syst. 57 Beibl.126: 31. 1921	<i>Arenaria rosani</i> Ten., Fl. Nap. Prodr.: 26. 1811	Lectotype (designated by CONTI & SANTANGELO, 2001): Italy, Basilicata (<i>manu Gussone</i>), <i>sine die</i> , <i>Rosano?</i> <i>s.n.</i> (NAP)	LAZ, ABR, MOL, CAM, SIC; old recorded in BAS
<i>Minuartia grigniensis</i> (Rchb.) Mattf., Repert. Spec. Nov. Regni Veg. Beih. 15: 141. 1922	<i>Tryphane grigniensis</i> Rchb., Deutschl. Fl. 3: 88. 1842	Not designated	LOM
<i>Minuartia laricifolia</i> (L.) Schinz & Thell. subsp. <i>ophiolitica</i> Pignatti, Giorn. Bot. Ital. Nov. Ser., 107: 207. 1973	-	Holotype (PIGNATTI, 1973) : Italy, Toscana, M. Murlo, 29.VII.1933, <i>Pichi Sermolli</i> <i>s.n.</i> (FI)	PIE, LOM, LIG, EMR, TOS; doubtfully recorded in UMB
<i>Minuartia moraldoi</i> F. Conti, Pl. Biosystems 135(2): 193. 2001	-	Holotype (CONTI, 2001): Italy, Campania, Cilento, versante occidentale del M. Sacro o Gelbison, rupi di fisch del Cilento nella faggeta, 1650 m a.s.l., 23.VIII.1999, <i>F. Conti & D.</i> <i>Tinti s.n.</i> (APP-Herb. Conti)	CAM

Table 3. Continuation.

Accepted name	Basyonym	Type	Ocurrence in Italy
<i>Moehringia bavarica</i> (L.) Gren. Subsp. <i>insubrica</i> (Degen) W.Sauer, Mém. Soc. Emul. Doubs 1(Bot.): 37. 1841	<i>Moehringia insubrica</i> Degen, Magyar Bot. Lapok 24: 76. 1925	Not designated	LOM
<i>Moehringia concarenae</i> F.Fenaroli & F.Martini, Candollea 47: 26. 1992	-	Holotype (FENAROLI & MARTINI, 1992): Italy, Flora Italiae-provincia di Brescia, Prealpi Orobie, Concarena, 1920 m, ghiaioni calcarei, WNW, 26.VII.1981, <i>F.</i> <i>Fenaroli s.n.</i> (FI; isotype in TSB)	LOM
<i>Moehringia dielsiana</i> Mattf., Ber. Deutsch. Bot. Ges. 43: 509. 1925	-	Not designated	LOM
<i>Moehringia glaucovirens</i> Bertol., Fl. Ital. [Bertol.] 6: 626. 1847	-	Not designated	LOM, TAA, VEN
<i>Moehringia markgrafii</i> Merxm. & Gutermann, Phyton (Horn, Austria) 7: 1. 1957	-	Holotype (MERXMÜLLER & GUTERMANN, 1957): Italy, Lombardia, Etschbuchtgebirge, Brescianer Alpen, im Sabbia- Tal, südwestexponierte Felswände oberhalb der Straße zwischen Barghe und Nozza (bei Vestone), ca. 305 m s. m., in Ritzen des Kalkfelses, an einer Stelle an einer durch den Straßenbau künstlich geschaffenen Felswand bis zur Straße herabgehend, 30.VI.1956, <i>H. Merxmüller 190/56</i> (M; isotype in B, GZU, K, W)	LOM
<i>Moehringia papulosa</i> Bertol., Fl. Ital. [Bertol.] 4: 363. 1840	-	Not designated	MAR
<i>Sagina pilifera</i> (DC.) Fenzl, Vers. Darstell. Alsin.: Tab. Ad 57. 1833	<i>Spergula pilifera</i> DC., Fl. Franç. ed. 3, 4: 774. 1805	Not designated	SAR

Table 3. Continuation.

Accepted name	Basionym	Type	Occurrence in Italy
<i>Sagina revelieri</i> Jord. & Fourr., Brev. Pl. Nov. 1: 11. 1866	-	Not designated	SAR
<i>Saponaria ocymoides</i> L. subsp. <i>alsinoides</i> (Viv.) Arcang., Comp. Fl. Ital., ed. 2: 304. 1894	<i>Saponaria alsinoides</i> Viv., Fl. Cors. Prod. App. 2: 7. 1830	Not designated	SAR
<i>Scleranthus aetnensis</i> Strobl, Oesterr. Bot. Z. 24: 69. 1874	-	Lectotype (designated by BRULLO & al., 2011): Italy, Sicily, Etna 1000-1500' communissima, 22.IV.1873, <i>P.G. Strobl s.n.</i> (FI)	SIC
<i>Scleranthus perennis</i> L. subsp. <i>vulcanicus</i> (Strobl) Bég., Nuovo Giorn. Bot. Ital. Nov. Ser., 16: 464. 1909	<i>Scleranthus vulcanicus</i> Strobl, Oesterr. Bot. Z. 24: 72. 1874	Lectotype (designated by BRULLO & al., 2011): Italy, Sicily, in regione deserta montis Aetnae 7500-8300 solo vulc., 24.V.1874, <i>P.G. Strobl s.n.</i> (FI)	SIC
<i>Scleranthus perennis</i> L. subsp. <i>stroblii</i> (Rchb.) Giardina & Raimondo, Fl. Medit., 20: 74. 2007	<i>Scleranthus stroblii</i> Rchb. ex Strobl, Oesterr. Bot. Z. 24: 72. 1874	Not designated	SIC
<i>Silene beguinotii</i> Vals., Boll. Soc. Sarda Sci. Nat., 30: 462 (1995)	.	Holotype (VALSECCHI, 1995): Italy, Sardinia, Golfo di Cugnana, Valsecchi, 1.VI.1978, <i>F. Valsecchi s.n.</i> (SS)	SAR
<i>Silene calabra</i> Brullo, Scelsi & Spamp., Bocconea 5(2): 517. 1997	.	Holotype (BRULLO & al., 1997): Italy, Calabria, Prv. Reggio Calabria, "Aspromonte, rupi di Pentadattilo", 08.V.1989, <i>S. Brullo, P. Signorello & G. Spampinato s.n.</i> (CAT; isotypes in CAT, FI, PAL)	CAL
<i>Silene cattariniana</i> Ferrarini & Cecchi, Webbia 56(2): 252. 2001	-	Holotype (FERRARINI & CECCHI, 2001): Italy, Abruzzo, M. Sirente in Val Lupara (in pascuis saxosis), VII.1877, <i>Profeta (Groves) s.n.</i> (FI)	MAR, LAZ, ABR, and doubtfully in UMB

Table 3. Continuation.

Accepted name	Basyonym	Type	Occurrence in Italy
<i>Silene echinata</i> Otth, Prodr. [DC.] 1: 380. 1824	-	Not designated	CAM, BAS, CAL; doubtfully recorded in LAZ
<i>Silene elisabethae</i> Jan, Flora (Regensb.) 15: 177. 1832	-	Not designated	LOM, TAA
<i>Silene giraldii</i> Guss., Enum. Pl. Inarim.: 3. 1854	-	Not designated	CAM, SAR
<i>Silene hicesiae</i> Brullo & Signor., Willdenowia 14: 141. 1984	-	Holotype (BRULLO & SIGNORELLO, 1984): Italy, Sicily, Panarea (Isole Eolie), 28.5.1983, S. Brullo & P. Signorello s.n. (CAT)	SIC
<i>Silene ichnusae</i> Brullo, De Marco & De Marco f., Nordic J. Bot. 17(2): 161. 1997	-	Holotype (BRULLO & SIGNORELLO, 1984): Italy, Sardinia, Stintino, Capo Falcone, rupi costa settentrionale, 2.V.1995, G. De Marco & G. De Marco s.n. (CAT; isotypes in CAT, FI, RO)	SAR
<i>Silene kemoniana</i> C.Brullo, Brullo, Giusso & Sciandr, Anal. J. Bot. Madrid, 69(2): 209. 2012	-	Holotype (BRULLO <i>et al.</i> , 2012): Italy, Sicily, monti presso San Martino delle Scale, in garighe su substrati carbonatici, 17.IV.2012, S. Brullo, G. Giusso del Galdo & V. Iardi s.n. (CAT; isotypes in CAT, FI, MA, PAL)	SIC
<i>Silene lanuginosa</i> Bertol., Desv. Journ. Bot. 2: 76. 1813	-	Lectotype (designated by BECHI & al., 1992): Italy, Tuscany, Ex alpinus apuanis, <i>sine die</i> , A. Bertoloni s.n. (GDOR)	TOS (Apuan Alps)
<i>Silene martinoli</i> Bocchieri & Mulas, Boll. Soc. Sarda Sci. Nat., 26: 301. 1988	-	Holotype (BOCCHIERI & MULAS, 1988): Italy, Sardinia, isola il Toro, pianori e anfratti rocciosi, 22.V.1988, E. Bocchieri & M. Mulas s.n. (CAG)	SAR

Table 3. Continuation.

Accepted name	Basionym	Type	Occurrence in Italy
<i>Silene miniae</i> Strobl, Verh. K. K. Zool.-Bot. Ges. Wien 53: 492. 1903	-	Not designated	SIC
<i>Silene morisiana</i> Bég. & Ravano, Arch. Bot. (Forlì) 15: 187. 1939	-	Lectotype (designated by VALSECCHI, 1988): Italy, “ <i>Silene sericea</i> All. var. in rupestribus Flumini majore, Moris, sine die: petala profunde bipartita rosea interne striis purpurascensibus picta, appendice bifida alba” (TO)	SAR
<i>Silene nocturna</i> L. subsp. <i>capraria</i> (Sommier) Peruzzi & Carta, Phytotaxa 88(3): 45. 2013	<i>Silene capraria</i> Sommier, Nuovo Giorn. Bot. Ital n.s. 5: 113. 1898	Lectotype (designated by FOGGI & al., 2001): Italy, Tuscany, Insula Capraria (Capraja), Punta del Trattorio, 06.IV.1896, <i>S. Sommier s.n.</i> (FI)	TOS
<i>Silene nodulosa</i> Viv., Fl. Cors.: 6. 1824	-	Not designated	SAR
<i>Silene notarisii</i> Ces., Bibl. Ital. 91: 346. 1838	-	Lectotype (designated by CONTI & al., 2003): Italy, Abruzzo, ex M. Cornu. <i>Orsini s.n.</i> (RO; isotype in FI)	MAR, UMB, LAZ ABR
<i>Silene nummica</i> Vals., Boll. Soc. Sarda Sci. Nat. 30: 452. 1995	-	Holotype (VARSECCHI, 1995): Italy, Sardinia, Alghero, torre Bantine e Sale, 16.IV.1973, <i>F. Valsecchi s.n.</i> (SS)	SIC, SAR
<i>Silene oenotriae</i> Brullo, Nordic J. Bot. 17(6): 649. 1998	-	HOLOTYPE (BRULLO, 1997): ITALY, MONTE POLLINO, CIVITA, RUPI PRESSO IL PONTE DEL DIAVOLO, 17.V.1993, <i>S. BRULLO s.n.</i> (CAT)	BAS, CAL
<i>Silene pichiana</i> Ferrarini & Cecchi, Webbia, 56(2): 246. 2001	-	Holotype (FERRARINI & CECCHI, 2001): Italy, Tuscany, Alpi Apuane, M. Pania della Croce (prope cacumen montis, 1800 m), 11.VII.1893, <i>S. Sommier</i> (FI).	TOS (Apuan Alps)

Table 3. Continuation.

Accepted name	Basionym	Type	Occurrence in Italy
<i>Silene requienii</i> Otth, Prodr. [DC.] 1: 381. 1824	-	Not designated	SAR
<i>Silene roemerii</i> Friv. subsp. <i>staminea</i> (Bertol.) Nyman, Consp. Fl. Europ.: 91. 1878-1882	<i>Silene staminea</i> Bertol., Fl. Ital. [Bertol.] 4: 585. 1841	Lectotype (designated by FOGGI & RICCERI, 1993): Italy, Abruzzo, M. Corno, Costa di Riuso, 1819, <i>Orsini s.n.</i> (BOLO, isoelectotypus in BOLO)	MAR, UMB, LAZ, ABR, BAS
<i>Silene rosulata</i> Soy.-Will. & Godr. subsp. <i>sanctae-theresiae</i> (Jeanm.) Jeanm., Willdenowia 14: 47. 1984	<i>Silene sanctae-theresiae</i> Jeanm., Candollea, 38: 620. 1983	Holotype (JEANMONOD, 1983): Italy, sardaigne (Prov. Tempio): Santa Teresa Gallura, à Baia de S. Reparata, sur l'isthme séparatn Santa Teresa de Capo Testa. Sables, dans le buissons (formation littorale à <i>Juniperus macrocarpa</i> et <i>Pistacia lentiscus</i>), env. 5-10 m, 30.V.1983, D. Jeanmonod, A. Charpin & M. Dittirch 21339a (G)	SAR
<i>Silene turbinata</i> Guss., Fl. Sicul. Prodr. 1: 506. 1827	-	Not designated	Doubtful in SIC
<i>Silene valsecchiae</i> Bocchieri, Boll. Soc. Sarda Sci. Nat. 26: 305. 1988	-	Holotype (BOCCHIERI, 1988): Italy, Sardinia, Isola Serpentaram a SE della casa diruta, 11.V.1986, E. Bocchieri s.n. (CAG)	SAR
<i>Silene velutina</i> Pourret ex Loisel., J. Bot. (Desvaux) 2: 324. 1809	-	Holotype (DESVAUX, 1809): Corsica, Bonifaicio, Lasalle (FI)	SAR
<i>Silene vulgaris</i> (Moench) Garcke subsp. <i>aetnensis</i> (Strobl) Pignatti, Giorn. Bot. Ital. Nov. Ser., 107: 208. 1973	<i>Silene inflata</i> Sm. var. <i>aetnensis</i> Strobl, Österr. Bot. Z. 35: 362. 1885	Not designated	SIC
<i>Spergularia macrorhiza</i> (Req. ex Loisel.) Heynh., Nom. Bot. Hort. 2: 689. 1846	<i>Arenaria macrorhiza</i> Req. ex Loisel, Mém. Soc. Linn. Paris 6(2): 414. 1827	Not designated	PUG, SAR

Table 3. Continuation.

Accepted name	Basionym	Type	Occurrence in Italy
<i>Spergularia madoniaca</i> Lojac., Malpighia 20: 193. 1906	-	Lectotype (designated by BRULLO <i>et al.</i> , 2011): Italy, Sicily, Madonie a Cantagidebbi, in pascuis montanis elatis solo calcareo, 09.VI.1885, <i>M. Lojacono s.n.</i> (FI)	SIC
<i>Stellaria media</i> (L.) Cirillo subsp. <i>romana</i> Beger, <i>Stellaria Media</i> Stud. Monogr. 3: 7. 1920	-	Not designated	PUG; old recorded in LAZ

Table 3. Continuation.

Genus	Taxon	Occurrence
<i>Alsine</i> L.	<i>Alsine procera</i> (Rchb.) Kreutzer var. <i>bartolotti</i> Lojac.	SIC
<i>Arenaria</i> L.	<i>Arenaria lanceolata</i> All. [= <i>Minuartia lanceolata</i> (All.) Mattf. var. <i>clementii</i> Mattf.]	PIE, LIG (M. Viso, V. Stura, V. Pallice)
<i>Cerastium</i> L.	<i>Cerastium alpinum</i> L. var. <i>salassorum</i> R.Beyer	VDA
	<i>Cerastium arvense</i> L. var. <i>etruscum</i> Lacaita	TOS
	<i>Cerastium arvense</i> L. var. <i>hirsutum</i> Ten.	CAM, CAL, SIC
	<i>Cerastium arvense</i> L. var. <i>insubricum</i> Moretti	VDA, LOM
	<i>Cerastium arvense</i> L. var. <i>subulatum</i> Huter, Porta & Rigo	ABR
	<i>Cerastium tomentosum</i> L. var. <i>elatum</i> Ten.	VEN, TAA, VDA, ABR, CAM
	<i>Cerastium tomentosum</i> L. var. <i>album</i> Presl	Central and Southern Apennine and SIC
	<i>Cerastium tomentosum</i> L. var. <i>columnae</i> Ten.	Central and Southern Apennine and SIC
	<i>Cerastium tomentosum</i> L. var. <i>graefferi</i> Guss. ex Nyman	ABR, CAM

Table 4. Names of Italian *Caryophyllaceae* taxa that are critical from taxonomic point of view (alphabetical order). Number of taxa per genus is indicated in parenthesis. Occurrences mainly follow FIORI (1923). Other references are indicated.

Genus	Taxon	Occurrence
<i>Dianthus</i> L.	<i>Dianthus arrostii</i> C.Presl	SIC (GIARDINA & al., 2007)
	<i>Dianthus siculus</i> C.Presl	SIC (GIARDINA & al., 2007)
<i>Gypsophila</i> L.	<i>Gypsophila gasparrinii</i> Guss. [= <i>Petrorhagia saxifraga</i> (L.) Link subsp. <i>gasparrinii</i> (Guss.) Greuter & Burdet]	SIC (GIARDINA & al., 2007)
<i>Herniaria</i> L.	<i>Herniaria glabra</i> L. subsp. <i>nebrodensis</i> Jan ex Nyman	Central Italy, and SIC GIARDINA & al., (2007)
	<i>Herniaria glabra</i> L. var. <i>permixta</i> Jan	BAS, SIC. GIARDINA & al., (2007) also reported the taxon in CAL
<i>Minuartia</i> L.	<i>Minuartia tenuifolia</i> (L.) Hiern var. <i>subulifolia</i> Guss.	SIC
	<i>Minuartia verna</i> (L.) Hiern var. <i>grandiflora</i> Hayek	VDA, Southren Italy and SIC
<i>Ortegia</i> L.	<i>Ortegia hispanica</i> L. var. <i>dichotoma</i> All.	PIE
<i>Sagina</i> L.	<i>Sagina procumbens</i> L. var. <i>corsica</i> Jord.	SAR
<i>Saponaria</i> L.	<i>Saponaria sicula</i> Raf.	SIC, SAR (GIARDINA & al., 2007)
<i>Silene</i> L.	<i>Silene agrigentina</i> Lojac.	SIC (GIARDINA & al., 2007)
	<i>Silene calycina</i> C.Presl	SIC (GIARDINA & al., 2007)
	<i>Silene italica</i> Pers. var. <i>salzmannii</i> Bad.	LIG, TOS
	<i>Silene italica</i> Pers. var. <i>pauciflora</i> Salzm.	SAR
	<i>Silene italica</i> Pers. var. <i>sicula</i> Ucria (– <i>S. italica</i> var. <i>pauciflora sensu</i> Guss.)	CAL, SIC (GIARDINA & al., 2007)
	<i>Silene muscipula</i> L. var. <i>corymbifera</i> Bertol.	LIG
	<i>Silene nicaeensis</i> All. var. <i>arenicola</i> Presl	SIC
	<i>Silene quadrifida</i> L. var. <i>villosa</i> Gelmi	FVG, TAA
	<i>Silene succulenta</i> Forssk. var. <i>corsica</i> DC.	SAR
	<i>Silene ticinensis</i> H.Neum. [= <i>Silene quadrifida</i> L. var. <i>ticinensis</i> (H.Neum.) Fiori & Paol.]	LOM (C. Tic. ai Denti della Vecchia, Muralto, Locarno e M. Generoso)
<i>Tunica</i> Ludw.	<i>Tunica illyrica</i> F. & M. var. <i>paniculata</i> Lanza	SIC

Table 4. Continuation.

REFERENCES

- ARRIGONI, P. V. (1984). Le piante endemiche della Sardegna: 139-147. *Boll. Soc. Sarda Sci. Nat.* **23**: 213-260.
- (2005). Note floristiche e tassonomiche sulla flora della Sardegna. *Parlatorea* **7**: 17-21.
- BACCHETTA, G. & S. BRULLO (2000). *Dianthus mossanus* (Caryophyllaceae), a new species from Sardinia. *Portugalia Acta Biol.* **19**: 295-301.
- , S. BRULLO, M. CASTI & P. G., GIUSSO DEL GALDO (2010). Taxonomic revision of the *Dianthus sylvestris* group (Caryophyllaceae) in central southern Italy, Sicily and Sardinia. *Nord. J. Bot.* **28**: 137-173.
- BARBERIS, G. (1988). *Cerastium utriense* sp. nov. (Caryophyllaceae) nell'Appennino ligure-piemontese. *Webbia* **42(2)**: 153-160.
- , N. BECHI & P. MICELI (1994). *Cerastium lacaitae* sp. nov., and typification of *C. scaranii* (Caryophyllaceae). *Fl. Medit.* **4**: 227-232.
- BECHI, N. (1998). Nomenclatural investigations in *Cerastium arvense* L. group (Caryophyllaceae). *Webbia* **52(2)**: 183-199.
- , P. MICELI & F. GARBARI (1992). Indagini biosistematiche sulla flora apuana. III Contributo. *Atti Soc. Tosc. Sci. Nat., Mem., ser. B* **108(1991)**: 171-237.
- BOCCHIERI, E. (1988). *Silene Valsecchiaae* e *Ferula arrigonii*, due specie nuove della Sardegna. *Boll. Soc. Sarda Sci. Nat.* **26**: 305-310.
- & B. MULAS (1988). Una specie nuova del genere *Silene* raccolta nell'isola il Toro (Sardegna sud-occidentale). *Boll. Soc. Sarda Sci. Nat.* **26**: 299-303.
- BRULLO, C., S. BRULLO & G. GIUSSO DEL GALDO (2011). Lectotipificazione e loci classici di alcuni endemismi della flora sicula. In S. PECCENINI, G. DOMINA & C. SALMERI (eds.) *Loci classici, taxa critici e monumenti arborei della flora d'Italia*: 35-39. Università di Roma Sapienza, Dip. di Biologia Vegetale, Orto Botanico Roma.
- , S. BRULLO, G. GIUSSO DEL GALDO & S. SCIANDRELLO (2012). A new species of *Silene* sect. *Dipterosperma* (Caryophyllaceae) from Sicily. *Anal. J. Bot. Madrid* **69(2)**: 209-216.
- BRULLO, S. (1997). *Silene oenotriae* (Caryophyllaceae): a new species from S Italy. *Nord. J. Bot.* **17(6)**: 649-652.
- & P. MINISSALE (2002). Il gruppo di *Dianthus rupicola* nel Mediterraneo centrale. *Inform. Bot. Ital.* **33(2)**: 537-542.
- & P. SIGNORELLO (1984). *Silene hicesiae*, a new species from the Aeolian Islands. *Willdenowia* **14**: 141-144.
- , F. SCELSE & G. SPAMPINATO (1997). *Silene calabra*, a new species from S. Italy. *Boccone* **5(2)**: 517-522.
- , F. SCELSE & G. SPAMPINATO (2000). New taxa belonging to *Dianthus vulturius* Guss. & Ten. group (Caryophyllaceae) from S Calabria (Italy). *Portugaliae Acta Biol.* **19**: 303-317.
- BUSCHMANN, A. (1938). Über einige ausdauernde *Cerastium*-Arten aus der Verwandtschaft des *C. lomenosum* Linné. *Rep. Spec. Nov. Regni Veg.* **43**: 118-143.
- CHAUDHRI, M. N. (1968). A revision of the Paronychineae. *Meded. Bot. Mus. Herb. Rijks. Utrecht* **285**: 1-440.
- CONTI, F. (1997). *Minuartia glomerata* subsp. *trichocalicyna* comb. & stat. nov. (Caryophyllaceae), a Central Apennine endemic. *Willdenowia* **27**: 73-79.
- (2001). *Minuartia moraldoi* (Caryophyllaceae), a new species from Cilento (Campania, S. Italy). *Pl. Biosystems* **135(2)**: 191-194.

- , & A. SANTANGELO (2001). Lectotypification of the names *Arenaria graminifolia* Ard., *Arenaria rosani* Ten. and *Arenaria alpicola* Ten. (Caryophyllaceae). *Taxon* **50**(1): 193-199.
- , G. ABBATE, A. ALESSANDRINI & C. BLASI (eds.) (2005). *An annotated checklist of the italian vascular flora*. Palombi & Partner. Roma.
- , L. GUBELLINI, D. LAKUSIC & A. SANTANGELO (2003) *Silene notarisii* (Caryophyllaceae), a neglected species of the Central Apennines, Italy. *Willdenowia* **33**: 265-272
- DESVAUX, N. A. (1809). De l'Essai sur la Flore du Département de Maine et Loire, de M. Batard, professeur de Botanique et directeur du Jardin des Plantes d'Angers (I); par N.A. Desvaux. *J. Bot. (Desvaux)* **2**: 324.
- DIANA, S. (1980). Le piante endemiche della Sardegna: 74-77. *Boll. Soc. Sarda Sci. Nat.* **19**: 289-309.
- DOMINA, G., G. GIUSSO DEL GALDO, D. GARGANO, M. LABRA, S. PECCENINI & L. PERUZZI (2012). The Italian loci classici census. *Taxon* **61**(6): 1351-1353.
- FENAROLI, F. & F. MARTINI, (1992). *Moehringia concarenae*, une nouvelle espèce des Préalpes Orobiennes (Lombardie, N-Italie). *Candollea* **47**(1): 21-30
- FERRARINI, E. & O. CECCHI (2001). Nuove specie del genere "Silene" (Caryophyllaceae) delle Alpi Apuane, dell'Appennino centrale (Italia) e della Francia meridionale. *Webbia* **56**(2): 241-263.
- FIORI, A. (1923). *Nuova Flora Analitica Italiana* 1(3). Ed. M. Ricci, Firenze.
- FOGGI, B. & C. RICCI (1993). Rivalutazione di *Silene staminea* Bertol. (Caryophyllaceae). *Webbia* **47**(2): 191-201.
- , A. GRIGIONI & P. LUZZI (2001). La flora vascolare dell'Isola di Capraia (Arcipelago Toscano): aggiornamento, aspetti fitogeografici e di conservazione. *Parlatorea* **5**: 5-53.
- GAMISANS, J. (1981). Contribution à l'étude de la flore de la Corse. VIII. *Candollea* **36**(1): 1-17.
- GIARDINA, G., F. M. RAIMONDO & V. SPADARO (2007). A catalogue of plants growing in Sicily. *Bocconeia* **20**: 78-79.
- IAMONICO, D. (2012). Studies on the genus *Atriplex* L. (Amaranthaceae) in Italy. II. Lectotypification of *Atriplex elongata* Guss. (Amaranthaceae). *Candollea* **67**(1): 181-185.
- (2013a). Typification of the Linnaean name *Hypochaeris maculata* (Asteraceae). *Nord. J. Bot.* **31**: 222-224.
- (2013b). Taxonomical and chorological study on the Central Mediterranean Basin endemic *Arenaria bertolonii* Fiori & Paol. (Caryophyllaceae). *Plant Biosystems* (in press).
- (2013c). Lectotypification of the Linnaean name *Senecio doria* L. (Asteraceae). *Ann. Bot. Fenn.* **50**(1): 71-72.
- (in press). Taxonomical, chorological and ecological notes on the Eastern Alps endemic *Arenaria huteri* (Caryophyllaceae, Alsinoideae). *Phytotaxa*.
- & L. PERUZZI, (2012). Lectotypification of the Linnaean name *Acanthus spinosus* (Acanthaceae). *Phytotaxa* **62**: 11-12.
- & J. L. REVEAL (2012). Lectotypification of the Linnaean name *Carpinus ostrya* L. (Betulaceae). *Taxon* **61**(3): 866.
- , E. GIOVI, M. IBERITE & G. ABBATE. (2011). Typification of *Trifolium latinum* Sebast. (Fabaceae) and comparison with related species. *Ann. Bot. Fennici* **48**(6): 459-464.
- JEANMONOD, D. (1983). *Silene sanctae-therasiae* Jeanmonod sp. nova (Caryophyllaceae) en Sardaigne. *Candollea* **38**: 619-631.

- LINNAEUS, C. (1753). *Species Plantarum* 1. Laurentii Salvii. Stockholm.
- LOJACONO POJERO, M. (1888). *Flora Sicula* 1(1). Palermo.
- MARHOLD, K. (2011). *Caryophyllaceae - Euro+Med Plantbase - the information resource for Euro-Mediterranean plant diversity*. Url: <http://ww2.bgbm.org/euroPlusMed/PTaxonDetail.asp?UUID=03F29E5C-E3E3-4C7C-A82A-B8BC7166D39D> (accessed: 23 september 2012).
- MAZZOLA, P., F. M. RAIMONDO & V. ILARDI (2004). *Dianthus minae* (Caryophyllaceae), a new species from Madonie Mountains (north Sicily). *Bocconea* **17**: 307-312.
- MCNEILL, J., F. R. BARRIE, W. R. BUCK, V. DEMOULIN, D. L. GREUTER, D. L. HAWKSWORTH, P. S. HERENDEEN, S. KNAPP, K. MARHOLD, J. PRADO, W. F. PROUD'HOMME VAN REINE, J. F. SMITH & J. H. WIERSEMA (eds.) (2012). International Code of Nomenclature for algae, fungi and plants (Melbourne Code): Adopted by the Eighteenth International Botanical Congress, Melbourne, Australia, July 2011. *Regnum Vegetabile* **154**: 1-274.
- MERXMÜLLER, H. & W. GUTERMANN (1957). Eine neue Moehringien-Sippe aus den Südalpen. *Phyton (Horn)* **7(1-3)**: 1-7.
- MYERS, N., R. A. MITTERMEIER, C. G. MITTERMEIER, G. A. B. FONSECA & J. KENTS (2000). Biodiversity hotspots for conservation priorities. *Nature* **403**: 853-858.
- PERUZZI, L. (2010). Checklist dei generi e delle famiglie della flora vascolare italiana. *Inform. Bot. Ital.* **42(1)**: 151-170.
- & D. GARGANO (2006). *Dianthus ferrugineus* Mill vs. *D. giuliae* Janka: nomenclatural considerations on the Italian yellow carnation. *Taxon* **55(3)**: 781-784.
- , F. CONTI & F. BARTOLUCCI (2012). Inventario delle piante vascolari endemiche d'Italia. In S. PECCENINI, G. DOMINA & C. SALMERI (eds.). *Flora vascolare d'Italia: studi biosistematici, taxa endemici e loci classici*: 5-6. Università di Roma Sapienza, Dip. di Biologia Vegetale, Orto Botanico Roma, 19-20 Ottobre 2012.
- PIGNATTI, S. (1973). Note critiche sulla flora d'Italia. I. Appunti miscellanei. *Giorn. Bot. Ital. Nov. Ser.* **107**: 207-221.
- THIERS, B. (2011). *Index Herbariorum: A global directory of public herbaria and associated staff*. New York Botanical Garden's Virtual Herbarium. Url: <http://sweetgum.nybg.org/ih/> (accessed: 26 September 2013).
- VALSECCHI, F. (1985). Le piante endemiche della Sardegna. 179. *Boll. Soc. Sarda Sci. Nat.* **24**: 333-337.
- (1988). Le Piante Endemiche della Sardegna: 190-191. *Boll. Soc. Sarda Sci. Nat.* **26**: 311-319.
- (1995). Indagini sistematiche, tassonomiche e corologiche nel gruppo "Silene colorata Poir. - *S. sericea* All. - *S. canescens* Ten.". *Boll. Soc. Sarda Sci. Nat.* **30**: 447-476.