

From *Schedonorus* and *Micropyropsis* to *Lolium* (Poaceae: Loliinae): New combinations and typifications

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Abstract Twenty-three new combinations (*Lolium adzharicum*, *L.* × *aschersonianum*, *L. atlantigenum*, *L.* × *brinkmannii*, *L. chayuense*, *L.* × *czarnohorensis*, *L. duratum*, *L.* × *elongatum*, *L.* × *fleischeri*, *L. font-queri*, *L. formosanum*, *L.* × *holmbergii*, *L. interruptum*, *L. interruptum* subsp. *corsicum*, *L.* × *krasani*, *L. liangshanicum*, *L. mairei*, *L. letourneuxianum*, *L. mediterraneum*, *L. pluriflorum*, *L.* × *schlickumii*, *L.* × *subnutans*, *L. tuberosum*) and one new name (*L. scabriflorum*) are proposed, fulfilling the relocation of the currently accepted *Schedonorus* and *Micropyropsis* taxa (including hybrids) under *Lolium*, along with three new combinations regarding natural intergeneric hybrids between *Lolium* and *Festuca* s.str., i.e. × *Festulolium* (× *F. hercynicum*, × *F. pseudofallax*, × *F. wippraense*). A new epitype for *Festuca arundinacea* is selected, while the names *F. adscendens*, *F.* × *aschersoniana*, *F.* × *brinkmannii*, *F. elongata*, *F.* × *gigas*, *F.* × *hausknechtii*, *F.* × *hausknechtii* f. *debilis*, f. *diffusior*, and f. *strictior*, *F.* × *holmbergii*, and *F. pooides* are lectotypified.

Keywords epitypification; fescues; grasses; lectotypification; nomenclature; nothospecies; taxonomy

■ INTRODUCTION

Traditionally, the distinction between the genera *Schedonorus* P.Beauv. (= *Festuca* L. p.p.) and *Lolium* L. (Poaceae) is based on macro-morphological features concerning the synflorescence and the spikelets. However, the occurrence of intermediate phenotypes applicable to five natural hybrids originally described under *Festuca* or × *Festulolium* Asch. & Graebn., has raised doubts about this distinction. A close relationship between the two genera is indicated by the ability of interspecific hybridization between various *Schedonorus* and *Lolium* species, as well as by the promiscuous pairing of homoeologous chromosomes during meiosis in hybrids and frequent homoeologous recombination (Kopecký & al., 2005, 2008). Thus, Darbyshire (1993) treated *Schedonorus* [1812] as a synonym of *Lolium* [1753], introducing four new combinations under the latter genus. This nomenclatural choice was subsequently confirmed on phylogenetic grounds by various authors (Gaut & al., 2000; Torrecilla & Catalán, 2002; Torrecilla & al., 2003; Catalán & al., 2004, 2007) who confirmed the taxa comprise a single monophyletic group. This was composed of the genera *Lolium*, *Micropyropsis* Romero Zarco & Cabezudo, and *Schedonorus* within the broad-leaved *Festuca* s.l. clade, in opposition to *Festuca* s.str. in the narrow-leaved clade. Later this monophyly was formalized by Soreng & al. (2015), who regarded *Micropyropsis* and *Schedonorus* as synonyms of

Lolium. In the present contribution, we provide an updated nomenclatural synopsis relocating all of the *Schedonorus* taxa, along with the monotypic genus *Micropyropsis*, into *Lolium*, thereby integrating or updating the previously published combinations (see Darbyshire, 1993; Banfi & al., 2005; Tison & al., 2010; Loos, 2010; Ardenghi & Foggi, 2015). It should be noted that while the delimitation of *Lolium* employed here has been widely used and accepted, a conservative and inclusive approach to Loliinae was adopted by Columbus & Smith (2010), who, through the proposal of the combination *Festuca perennis* (L.) Columbus & J.P.Sm. (≡ *Lolium perenne* L.), delineated a broader circumscription of *Festuca* s.l. that included *Lolium* and, implicitly, further genera belonging to the same tribe.

Within the nomenclatural treatment, the acronym “n.v.” (= “non vidi”) was placed besides those combinations whose protologue has not been checked by the authors.

■ NOMENCLATRURAL TREATMENT

Lolium L., Sp. Pl.: 83. 1753 – Type (designated by Nash in Britton & Brown, III. Fl. N.U.S., ed. 2, 1: 281. 1913): *Lolium perenne* L.

= *Schedonorus* P.Beauv., Ess. Agrostogr.: 99. 1812 (“*Schedonorus*” and “*Schenodorus*”) ≡ *Festuca* sect. *Schedonorus* (P.Beauv.) W.D.J.Koch, Syn. Fl. Germ. Helv. 1: 813. 1837 ≡

- Festuca* subg. *Schedonorus* (P.Beauv.) Peterm., *Deutschl. Fl.*: 643. 1846–1849 = *Bromus* sect. *Schedonorus* (P.Beauv.) Griseb. in *Ledeb., Fl. Ross.* 4: 355. 1852 = *Bromus* subg. *Schedonorus* (P.Beauv.) Nyman, *Syll. Fl. Eur.*: 418. 1885 = *Lolium* subg. *Schedonorus* (P.Beauv.) Darbysh. in *Novon* 3: 241. 1993 – Type (designated by Pfeiffer, *Nomencl. Bot.* 2: 1071. 1874): *Bromus elatior* (L.) Koeler (= *Festuca elatior* L., nom. utique rej. = *F. arundinacea* L. as usually applied).
- = *Schedonorus* sect. *Plantynia* Dumort., *Fl. Belg.*: 159. 1827 = *Festuca* sect. *Bromoides* Rouy in Rouy & Foucaud, *Fl. France* 14: 225. 1913, nom. illeg. superfl. (Art. 52.1–2 of the *ICN*) = *Festuca* sect. *Plantynia* (Dumort.) Tzvelev, *Zlaki SSSR*: 394. 1976 – Type: *Schedonorus giganteus* (L.) Dumort. (= *Bromus giganteus* L.).
- = *Festuca* [unranked] *Bovinae* Fr. ex Andersson, *Pl. Scand.* 2.: 17. 1852 = *Festuca* sect. *Bovinae* (Fr. ex Andersson) Hack., *Bot. Centralbl.* 8: 407. 1881, nom. superfl. (Art. 52.3 of the *ICN*) – Type (designated by Tzvelev, *Zlaki SSSR*: 394. 1976): *Festuca pratensis* Huds.
- = *Festuca* subg. *Drymonaetes* V.I.Krecz. & Bobrov in Komarov, *Fl. URSS* 2: 533. 1934 = *Schedonorus* subg. *Drymonaetes* (V.I.Krecz. & Bobrov) Holub in *Preslia* 70: 112. 1998 – “*Drymonaetes*” Ehrh., *Beitr. Naturk.* 4: 147. 1789, nom. nud. – Type: *Schedonorus giganteus* (L.) Dumort. (= *Bromus giganteus* L.).
- = *Mycopropyropsis* Romero Zarco & Cabezudo in *Lagascalia* 11: 95. 1983 – Type: *Mycopropyropsis tuberosa* Romero Zarco & Cabezudo.
- = ×*Schedolium* Holub in *Preslia* 70: 111. 21 Jun 1998 (*Lolium* L. × *Schedonorus* P.Beauv.).
- = ×*Schedolium* Soreng & Terrell in *Phytologia* 83: 86. 27 Jul 1998 (“August 1997”) (*Lolium* L. × *Schedonorus* P.Beauv.).
- Within the taxa formerly placed in *Schedonorus*, Torrecilla & Catalán (2002) identified two distinct clades: a “European” one, including, among the others, *Festuca arundinacea* Schreb., *F. gigantea* (L.) Vill., and *F. pratensis* Huds. together with *Lolium perenne* L.; and a “Maghrebian” one, comprising mostly north-western African and south-western European taxa (*F. arundinacea* subsp. *atlantigena* (St.-Yves) Auquier, *F. arundinacea* var. *glaucescens* Boiss., *F. arundinacea* var. *letournexiana* (St.-Yves) Torrec. & Catalán, *F. mairei* St.-Yves). On the basis of these results, which were reiterated by Catalán & al. (2009), the separation of the two previously recognized genera or infrageneric taxa (*Lolium*, *Schedonorus*) is not practicable and not accepted here; owing to the fact that the taxa belonging to the second clade, cannot be treated as subspecies of *Lolium arundinaceum* (Schreb.) Darbysh. as has been done by some European workers (e.g., Foggi & Müller, 2009), but rather as independent species.

Lolium adzhagicum (Tzvelev) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** = *Schedonorus adzhagicus* Tzvelev in *Novosti Sist. Vyssh. Rast.* 43: 54. 30 Aug 2012 (“2011”) – Holotype: [Georgia] “Аджария, бассейн р. Коблиани, яйла Чечилья близ Батуми, на каменистой равнине в травяном высоко-котравье” (Adzharia, systema

fl. Koblani, jajla Czezilja prope Batumi, in planitie lapidosa in altiherbeto graminoso), 19 Aug 1949, *Naumova s.n.* (LE).

Lolium apenninum (De Not.) Ardenghi & Foggi in *Taxon* 64: 1039. 2015 = *Festuca apennina* De Not., *Repert. Fl. Ligust.*: 468. 1844 = *Festuca elatior* var. *apennina* (De Not.) Hack. in *Bot. Centralbl.* 8: 407. 1881 = *Festuca elatior* f. *apennina* (De Not.) Fiori in Fiori & Paoletti, *Fl. Italia* 1: 92. 1896 = *Festuca pratensis* subsp. *apennina* (De Not.) Hegi, *Ill. Fl. Mitt.-Eur.* 1: 343. 1908 = *Schedonorus apenninus* (De Not.) Tzvelev in *Novosti Sist. Vyssh. Rast.* 31: 259. 1998 = *Lolium pratense* subsp. *apenninum* (De Not.) Banfi, Bracchi & Galasso in *Mem. Soc. Ital. Sci. Nat. Mus. Civico Storia Milano* 33(2): 8. 2005 = *Schedonorus pratensis* subsp. *apenninus* (De Not.) H.Scholz & Valdés in *Willdenowia* 35: 243. 2005 – Lectotype (designated by Ardenghi & Foggi in *Taxon* 64: 1039. 2015): [Italy] “Mt. Gottro Lig. orient.”, s.d., *G. De Notaris s.n.* (FI barcode FI002995!). — Image of lectotype available at <http://parlatore.msn.unifi.it/img72/FI002995.jpg>

Lolium arundinaceum (Schreb.) Darbysh. in *Novon* 3: 241. 1993 subsp. ***arundinaceum*** = *Festuca arundinacea* Schreb., *Spic. Fl. Lips.*: 57. 9 Jul–25 Oct 1771 = *Festuca elatior* var. *arundinacea* (Schreb.) Roth, *Tent. Fl. Germ.* 1: 46. 1788 = *Bromus arundinaceus* (Schreb.) Roth, *Tent. Fl. Germ.* 2(1): 141. 1789 = *Schedonorus arundinaceus* (Schreb.) Dumort., *Observ. Gramin. Belg.*: 106. 1824, nom. cons. vs. *Schedonorus arundinaceus* Roem. & Schult., *Syst. Veg.*, 2: 700. 1817 (“*Schenodorus*”) (App. IV of the *ICN*) = *Festuca elatior* subsp. *arundinacea* (Schreb.) Čelak., *Prodr. F. Böhmen*: 51. 1867 – Lectotype (designated by Reveal & al. in *Taxon* 40: 136. 1991): [illustration in] Scheuchzer, *Agrostographia*: pl. 5 fig. 18. 1719 – **Epitype (designated here)**: [Italy] “*Festuca elatior* / Prov. Pavia / Coll. di Stradella / Oltrepò pavese / Com. Canneto / località ‘Malaspina’”, late Jun 1932, *L. Ceroni* 38 (PAV [Erbario Lombardo]!).

The epitypification of *Festuca arundinacea* by Kar & al. (2015) is not appropriate, being based on a “Maghrebian” specimen (from the High Atlas, Morocco), that is in serious conflict with *F. arundinacea* sensu Schreber: in accordance with the results by Torrecilla & Catalán (2002), which place *F. arundinacea* within the “European clade” (see also the note to *Lolium*), the correct provenance of the epitype should be European rather than African. Thus, a new epitype, collected in northern Italy and whose identity has been confirmed by one of the authors (Ardenghi), has been selected.

= *Festuca elatior* L., *Sp. Pl.*: 75. 1753, nom. utique rej. (App. V of the *ICN*) = *Poa elatior* (L.) Moench, *Enum. Pl. Hass.*: 37. 1777, nom. rej. = *Bromus elatior* (L.) Koeler, *Descr. Gram.*: 214. 1802, nom. rej. = *Schedonorus elatior* (L.) P.Beauv., *Ess. Agrostogr.*: 177. 1812, nom. rej. = *Festuca pratensis* var. *elatior* (L.) Gaudin, *Fl. Helv.* 1: 293. 1828, nom. rej. = *Bucetum elatius* (L.) Parn., *Grass. Scotland*: 107. 1842, nom. rej. = *Tragus elatior* (L.) Panz. ex B.D.Jacks., *Index*

Kew. 2: 1098. 1895, nom. rej. \equiv *Gnomonia elatior* (L.) Lunell in Amer. Midl. Naturalist 4: 224. 1915, nom. rej. – Lectotype (designated by Terrell in Brittonia 19: 131. 1967): “*Habitat in Europae pratis fertilissimis*”, Herb. Linn. No. 92.17 (LINN [image!]). — Image of lectotype available at <http://linnean-online.org/1523>

\equiv *Poa phoenix* Scop., Fl. Carniol., ed. 2, 1: 74. before 20 Sep 1771 \equiv *Festuca phoenix* (Scop.) Vill., Prosp. Hist. Pl. Dauphiné: 17. 1779 \equiv *Schedonorus phoenix* (Scop.) Holub in Preslia 70: 113. 1998 – Type: not designated.

No specimens suitable for typification purposes were located at B and PAV. According to Ruggero Tomaselli, Scopoli herbarium material in Moretti Herbarium at PAV was destroyed during World War II (Stafleau & Cowan, 1985); further searches at PAV were not satisfactory.

\equiv *Festuca uechtriziana* Wiesb. in Oesterr. Bot. Z. 28: 218. 1878 \equiv *Festuca elatior* var. *uechtriziana* (Wiesb.) Hack. in Bot. Centralbl. 8: 407. 1881 \equiv *Festuca arundinacea* var. *uechtriziana* (Wiesb.) Beck, Fl. Nieder-Österreich: 96. 1890 \equiv *Festuca arundinacea* [unranked] *uechtriziana* (Wiesb.) Rouy in Rouy & Foucaud, Fl. France 14: 227. 1913 (“race”) \equiv *Schedonorus uechtrizianus* (Wiesb.) Holub in Preslia 70: 113. 1998 \equiv *Schedonorus arundinaceus* subsp. *uechtrizianus* (Wiesb.) H.Scholz & Valdés in Willdenowia 37: 442. 2007 – Lectotype (designated by Ardenghi & al. in Phytotaxa 84: 58–59. 2013): [Austria] “M. Enzersdorf bei Wien, Weberwiese”, 25 May 1878, J.B. Wiesbaur 63 (W No. 1916-0014975!). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=166229>

Lolium arundinaceum* subsp. *orientale (Hack.) G.H.Loos in Jahrb. Bochum. Bot. Vereins 1: 124. 2010 \equiv *Festuca elatior* subvar. *orientalis* Hack., Monogr. Festuc. Eur.: 154. 1882 \equiv *Festuca arundinacea* subsp. *orientalis* (Hack.) K.Richt., Pl. Eur. 1: 102. 1890 \equiv *Festuca orientalis* (Hack.) A.Kern. ex V.I.Krecz. & Bobrov in Komarov, Fl. URSS 2: 531. 1934, nom. illeg. (Art. 53.1 of the ICN), non B.Fedtsch. in Izv. Imp. Bot. Sada Petra Velikago 14(suppl. 2): 87. 1915 (n.v.) \equiv *Schedonorus arundinaceus* subsp. *orientalis* (Hack.) H.Scholz & Valdés in Willdenowia 35: 243. 2005 – Lectotype (designated by Tzvelev & Czerepanov, Fl. Evropejskoj Časti SSSR 1: 259. 1974): [Hungary] Keresztur bei Pest, s.d., A.J. Kerner von Marilaun s.n. (WU [herb. Kerner] No. 0076936 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=501394>

The lectotypification by Tzvelev & Czerepanov (1974) has priority over the one by Ardenghi & al. (2013).

\equiv *Festuca arundinacea* var. *aristata* Regel in Trudy Imp. S.-Peterburgsk. Bot. Sada 7: 596. 1881 \equiv *Schedonorus arundinaceus* var. *aristatus* (Regel) Tzvelev, Konspekt Fl. Kavkaza 2: 308. 2006 (n.v.) – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

\equiv *Festuca regeliana* Pavlov in Byull. Moskovsk. Obsch. Isp. Prir., Otd. Biol. 47: 80. 1938 – Holotype: Russia: Karatau

mountains, village of Vannoskoe, meadow along the bank of irrigation channel, 1 Jun 1931, N. Samsel 102 (MW; isotype: LE).

Lolium \times aschersonianum (Dörfl.) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Lolium arundinaceum* (Schreb.) Darbysh. subsp. *arundinaceum* \times *L. pratense* (Huds.) Darbysh.] \equiv *Festuca \times aschersoniana* Dörfl., Herb. Norm., Sched. Cent. 53–54: 108 (n. 5380). 1911, non *Festuca intermedia* Roem. & Schult., Syst. Veg. 2: 715. 1817 \equiv *Festuca elatior* [unranked] *intermedia* Hack., Monogr. Festuc. Eur.: 151. 1882 \equiv *Festuca elatior* subsp. *intermedia* (Hack.) K.Richt., Pl. Eur. 1: 101. 1890 \equiv *Schedonorus \times aschersonianus* (Dörfl.) Holub in Preslia 70: 113. 1998 – **Lectotype (designated here)**: “HERBARIUM NORMALE. / editum ab I. Dörfler / 5380. *Festuca Aschersoniana* Dörfler. / (*F. arundinacea* \times *elatior*) / [synonyms omitted] / Suecia. Scania. In pascuis maritimis ad „Bjerred“., Jul 1909 and Jun 1910, O.R. Holberg 5380 (P barcode P00653919!; isolectotypes BM barcode BM001067173 [image!], DAO barcode 000465081 [image!]).

Lolium atlantigenum (St.-Yves) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** \equiv *Festuca elatior* var. *atlantigena* St.-Yves in Candollea 1: 36. 1922 \equiv *Festuca arundinacea* subsp. *atlantigena* (St.-Yves) Auquier in Bull. Soc. Échange Pl. Vasc. Eur. Occid. Bassin Médit. 16: 142. 1976 \equiv *Festuca fenas* subsp. *atlantigena* (St.-Yves) Cebolla & Rivas Ponce in Candollea 58: 195. 2003 \equiv *Schedonorus arundinaceus* subsp. *atlantigenus* (St.-Yves) H.Scholz in Beih. Ber. Inst. Landschafts- Pflanzenökol. Univ. Hohenheim 16: 74. 2003 – Type: not designated.

No specimens suitable for typification purposes were located at G and LAU. A specimen stored at P (barcode P00083436) could be designated as lectotype; images of the exsiccatum were requested from the herbarium, yet without receiving them.

\equiv *Festuca elatior* subvar. *minutiflora* St.-Yves in Bull. Soc. Bot. France 71: 125. 1924 \equiv *Festuca elatior* var. *minutiflora* (St.-Yves) Litard. in Candollea 10: 141. 1945 – Holotype: [Spain] “Sierra Nevada: Dehesa de San Geronimo 2.000 m, Hut., P. et R. [= Huter, Porta et Rigo] It. hisp. 1899 sub: «*Festuca*» n° 503” (P-CO, lost?).

The holotype is reported to be conserved at “Herb. Coss.”, Herbarium Cosson, currently at P (Stafleau & Cowan, 1976); yet, searches at P did not result any exsiccatum of our interest.

Lolium \times brinkmannii (A.Braun) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Lolium giganteum* (L.) Darbysh. \times *L. perenne* L.] \equiv *Festuca \times brinkmannii* A.Braun, Index Seminum [Berlin] 1861(app.): 11. 1862 (“*Brinkmannii*”) \equiv \times *Festulolium brinkmannii* (A.Braun) Asch. & Graebn., Syn. Mitteleur. Fl. 2(1): 769. 1902 \equiv \times *Schedolium brinkmannii* (A.Braun) Holub in Preslia 70: 112. 21 Jun 1998 \equiv \times *Schedololium brinkmannii* (A.Braun) Soreng & Terrell in Phytologia 83: 87. 27 Jul 1998 (“August 1997”) – **Lectotype (designated here)**: [Germany]

“*Festuca Brinkmanni* A. Br. / mihi! / Fl. Megapolit. pr. Rostochium. Herb. Dr. de Kühlewein. / olim spont. nunc in horto / Brinkman. cult. / Herb. Pittoni”, s.d., *D.F.L. Brinkmann s.n.* (W No. 0032104 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=285312>

Lolium chayuense (L.Liu) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** = *Festuca chayuensis* L.Liu, Fl. Reipubl. Popularis Sin. 9(2): 387. 2002 – “*Festuca chayuensis*” L.Liu, Vasc. Pl. Hengduan Mount. 2: 2174. 1994 (n.v.), nom. nud. – Holotype: [China] Xizang: Zayü, 3900 m, 26 Sep 1982, *Qinghai-Xizang Exped. 10706* (PE).

Lolium ×czarnohorensse (Zapał.) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Lolium apenninum* (De Not.) Ardenghi & Foggi × *L. giganteum* (L.) Darbysh.] = *Festuca czarnohorensis* Zapał., Consp. Fl. Gallic. Crit. 3: 230. 1911 = *Schedonorus ×schlickumii* nothosubsp. *czarnohorensis* (Zapał.) B.Bock in Bull. Soc. Bot. Centre-Ouest, n.s., 43: 220. 2012 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

Lolium duratum (B.S.Sun & H.Peng) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** = *Festuca durata* B.S.Sun & H.Peng in Guihaia 13: 223. 1993 – Holotype: [China] Hezhang (赫章), Jiucaiping (韭菜坪), 2580 m, roadside, 25 Oct 1989, *West Guizhou. Exped. 1864b* (HGAS).

Lolium ×elongatum (Ehrh.) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Lolium perenne* L. × *L. pratense* (Huds.) Darbysh.] = *Festuca elongata* Ehrh., Beitr. Naturk. 6: 133. 1791 = *Lolium ×festuceum* Link in Linnaea 2: 235. 1827, nom. illeg. superfl. (Art. 52.1–2 of the *ICN*) – **Lectotype (designated here):** [Germany] “*Festuca elongata* Ehrh. / Hannoveræ. / 1. Ehrh. Calam. 93. [...]”, s.d., *J.F. Ehrhart s.n.* (LINN-HS No. 132.28.1, specimen on the left annotated with the number “1” [image!]; isolectotypes: W Nos. 0032288 [image!] & 1889-0256346 [image!]). — Image of lectotype available at <http://linnean-online.org/28162>

Although the synflorescence of the type specimens is unbranched (*Lolium perenne*-like), their spikelets are shortly pedicellate and only slightly laterally compressed (as in *L. pratense*): these characters indicate the hybrid origin of the specimens.

= *Festuca loliacea* Huds., Fl. Angl.: 38. 1762, non *Lolium loliaceum* (Bory & Chaub.) Hand.-Mazz. in Ann. K. K. Naturhist. Hofmus. 28: 32. 1914 = *Festuca fluitans* var. *loliacea* (Huds.) Huds., Fl. Angl., ed. 2, 1: 47. 1778 = *Poa loliacea* (Huds.) Koeler, Descr. Gram.: 207. 1802, nom. illeg. (Art. 53.1 of the *ICN*), non Huds., Fl. Angl.: 35. 1762 = *Schedonorus loliaceus* (Huds.) P.Beauv., Ess. Agrostogr.: 177. 1812 = *Festuca pratensis* var. *loliacea* (Huds.) St.-Amans, Fl. Agen.: 42. 1821 = *Brachypodium loliaceum* (Huds.) Link, Hort. Berol. 1: 42. 1827, nom. illeg. (Art. 53.1 of the *ICN*), non (Huds.) P.Beauv., Ess. Agrostogr.: 155.

1812 = *Lolium festucoides* Raspail in Ann. Sci. Observ. 2: 243. 1829, nom. illeg. superfl. (Art. 52.1–2 of the *ICN*) = *Bucetum loliaceum* (Huds.) Parn., Grass. Scotland: 104. 1842 = *Glyceria lolicacea* (Huds.) Godr., Fl. Lorraine 3: 168. 1844 = *Festuca elatior* var. *loliacea* (Huds.) Wimm., Fl. Schles., ed. 3: 59. 1857 = *Festuca elatior* subsp. *loliacea* (Huds.) Arcang., Comp. Fl. Ital., ed. 2: 62. 1894 = *Tragus loliaceus* (Huds.) Panz. ex B.D.Jacks., Index Kew. 2: 1099. 1895 = ×*Festulolium loliaceum* (Huds.) P.Fourn., Quatre Fl. France: 81. 1935 = ×*Schedolium loliaceum* (Huds.) Holub in Preslia 70: 112. 21 Jun 1998 = ×*Schedololium loliaceum* (Huds.) Soreng & Terrell in Phytologia 83: 86. 27 Jul 1998 (“August 1997”) – Type: not designated.

No specimens suitable for typification purposes were located at B, E, K, LINN, and UPS.

= *Festuca loliacea* var. *aristata* A.Braun ex Döll, Fl. Baden 1: 164. 1855 = *Festuca ×braunii* K.Richt., Pl. Eur. 1: 103. 1890 = ×*Festulolium adscendens* var. *braunii* (K.Richt.) Rouy in Rouy & Foucaud, Fl. France 14: 229. 1913, nom. superfl. (Art. 52.3 of the *ICN*) = ×*Festulolium braunii* (K.Richt.) A.Camus in Bull. Mus. Natl. Hist. Nat. 33: 538. 1927 = ×*Schedololium braunii* (K.Richt.) Soreng & Terrell in Phytologia 83: 87. 1998 = ×*Schedolium braunii* (K.Richt.) Stace in Watsonia 27: 247. 2009 – Type: not designated.

Festuca ×braunii K.Richt., based on *F. loliacea* var. *aristata* A.Braun ex Döll, is a short-awned form of *Lolium ×elongatum*, erroneously considered as a hybrid between *L. multiflorum* and *L. pratense*; the correct name of the latter is *L. ×subnutans* (Holmberg, 1930). No attempts were made to locate material suitable for typification purposes.

Lolium ×fleischeri (Rohlena) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Lolium arundinaceum* (Schreb.) Darbysh. subsp. *arundinaceum* × *L. giganteum* (L.) Darbysh.] = *Festuca fleischeri* Rohlena in Allg. Bot. Z. Syst. 8: 85. 1903 = *Schedonorus ×fleischeri* (Rohlena) Holub in Preslia 70: 113. 1998 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

= *Festuca ×fleischeri* f. *moyana* Erdner in Ber. Naturwiss. Vereins Schwaben Neuburg 1911: 559. 1911 = *Festuca ×moyana* (Erdner) Erdner in Repert. Spec. Nov. Regni Veg. 14: 379. 1916 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

= *Festuca ×gigas* Holmb. in Dörfl., Herb. Norm., Sched. Cent. 53–54: 107 (n. 5377). 1911 – **Lectotype (designated here):** [Sweden] “HERBARIUM NORMALE. / editum ab I. Dörfler. / 5377. *Festuca gigas* Holmberg, nova hybr.! / (*Festuca arundinacea* × *gigantea*) / [Non *F. arundinacea* × *gigantea* Neuman, Sveriges Flora, / p. 734 (1901)]. [description omitted] / f. *subarundinacea* Holmberg. / [description omitted] / Suecia. Scania. „Lund“ in horto culta e loco unico adhuc noto / (Dania, Seelandia, Söndersö) introducta”, Aug 1909 and Jul 1910, *O.R. Holmberg 5377* (JE barcode JE00006517 [image!]; isolectotypes: BM barcode BM001067174 [image!], BRNU Nos. 350396 & 003589,

DAO barcode 01-01000490490 [image!], W Nos. 1911-0005708 [image!], 1916-0031987 [image!], 1916-0031988 [image!] & 2009-0017491 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=114462>

According to Art. 26.2 of the *ICN* (McNeill & al., 2012), the name *Festuca gigas* f. *subarundinacea* Holmb. is not validly published, since it is based on the same type of *F. gigas* Holmb.

Lolium font-queri (St.-Yves) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** ≡ *Festuca font-queri* St.-Yves in Cavanillesia 3: 5. 1930, non (Litard.) Romo in Willdenowia 16: 115. 1986 ≡ *Schedonorus font-queri* (St.-Yves) H.Scholz & Valdés in Willdenowia 35: 243. 2005 – Lectotype (designated by López Rodríguez & Catalán in Fl. Medit. 9: 282. 1999): [Morocco] “Hab. in saxosis arenaceis montis Tidiguin (Atlante Riphæo), ad 2400 m”, 17 Jul 1929, *Font Quer s.n.* (G, specimen on the right).

= *Festuca yvesii* Litard. in Bull. Soc. Hist. Nat. Afrique N. 14: 337. 1923, nom. illeg. (Art. 53.1 of the *ICN*), non Sennen & Pau in Treb. Inst. Catalana Hist. Nat. 3: 250. 1918 (“1917”) ≡ *Festuca litardiereana* Vigo (“*litardierana*”) in Acta Bot. Barcinon. 35: 687. 1983, nom. illeg. (Art. 53.1 of the *ICN*), non Maire in Bull. Soc. Hist. Nat. Afrique N. 22: 323. 1931 – Lectotype (designated by López Rodríguez & Catalán in Fl. Medit. 9: 282. 1999): [Morocco] “Reraya: The. vallée de l’Acif Ouenkrime, rocaïlles porphyriques, 3050 m env.”, 24 Jul 1923, *R. de Litardière s.n.* (G).

= *Festuca font-queri* var. *lipskii* St.-Yves in Cavanillesia 3: 6. 1930 – Holotype: [Uzbekistan] “Asia media. Buchara: Scbachrisjals, 6700’; leg. LIPSKI, 3-VI-1896 (in herb. Hort. Bot. Petrôp.)” (LE, lost?).

The aforementioned holotype was not found at LE; no original material was located at G (López Rodríguez & Catalán, 1999).

Lolium formosanum (Honda) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** ≡ *Festuca formosana* Honda in Bot. Mag. (Tokyo) 42: 134. 1928, non E.B.Alexeev in Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 82: 99. 1977 – Type: [China] Formosa, open ridge of m. Morrison, among rocks, 13000 ft., 23 Oct 1912, *W.R. Prince 993* (K).

Lolium giganteum (L.) Darbysh. in Novon 3: 241. 1993 ≡ *Bromus giganteus* L., Sp. Pl.: 77. 1753 ≡ *Festuca gigantea* (L.) Vill., Hist. Pl. Dauphiné 2: 110. 1787 ≡ *Avena gigantea* (L.) Salisb., Prodr. Stirp. Chap. Allerton: 23. 1796 ≡ *Zerna gigantea* (L.) Gray, Nat. Arr. Brit. Pl. 2: 116. 1821 ≡ *Schedonorus giganteus* (L.) Dumort., Fl. Belg.: 159. 1827 ≡ *Bucetum giganteum* (L.) Parn., Grass. Scotland: 108. 1842 ≡ *Forasaccus giganteus* (L.) Bubani, Fl. Pyren. 4: 383. 1901–1902 – Lectotype (designated by Darbyshire in Cafferty & al. in Taxon 49: 248. 2000): “*Habitat in Europae sylvis siccis*”, s.d., *Herb. A. van Royen 913.62-78* (L).

= *Bromus triflorus* L., Sp. Pl., ed. 2: 115. 1762 ≡ *Festuca triflora* (L.) Sm., Engl. Bot.: pl. 1918. 1808, nom. illeg. (Art. 53.1 of the *ICN*), non J.F.Gmel., Syst. Nat. 2: 187. 1791 ≡

Zerna gigantea var. *triflora* (L.) Gray, Nat. Arr. Brit. Pl. 2: 116. 1821 ≡ *Festuca gigantea* var. *triflora* (L.) Kunth, Révis. Gramin.: 132. 1829 ≡ *Festuca gigantea* var. *subtriflora* Schur, Enum. Pl. Transsilv.: 798. 1866, nom. illeg. superfl. (Art. 52.1–2 of the *ICN*) ≡ *Festuca gigantea* subsp. *triflora* (L.) Arcang., Comp. Fl. Ital.: 793. 1882 ≡ *Festuca gigantea* f. *triflora* (L.) Hiitonen, Suom. Kasvio: 215. 1933 (n.v.) – Lectotype (designated by Stace in Cafferty & al. in Taxon 49: 248. 2000): [illustration in] Scheuchzer, Agrostographia: pl. 5 fig. 19. 1719.

= *Bromus aquaticus* Schrank, Baier. Fl. 1: 367. 1789 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

= *Festuca ×haussknechtii* Torges in Mitt. Geogr. Ges. (Thüringen) Jena, Mitt. Bot. Vereins Gesamtthüringen 8: 6. 1889 – **Lectotype (designated here)**: [Germany] “Flora / *Festuca gigantea* × *rubra* / Binz”, 14 Aug 1888, *C. Haussknecht s.n.* (JE barcode JE00005156 [image!]; isolectotype: JE barcode JE00005158 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=139327>

Originally described as a hybrid between *Festuca rubra* L. and *Lolium giganteum*, actually this taxon corresponds to *Lolium giganteum*.

= *Festuca ×haussknechtii* f. *debilis* Torges in Mitt. Geogr. Ges. (Thüringen) Jena, Mitt. Bot. Vereins Gesamtthüringen 8: 7. 1889 – **Lectotype (designated here)**: [Germany] “HERBARIUM HAUSSKNECHT, JENA (JE) / *Festuca gigantea* × *rubra* n. hybr. / *F. Haussknechtii* m. / f. *debilis* / Inter magnam parentum copiam solo turfoso- / arenoso subhumido pratorum pr. Binz / insulae Rügen”, 14 Aug 1888, *C. Haussknecht s.n.* (JE barcode JE00006516 [image!]; isolectotype: JE barcode JE00006543 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=111070>

= *Festuca ×haussknechtii* f. *diffusior* Torges in Mitt. Geogr. Ges. (Thüringen) Jena, Mitt. Bot. Vereins Gesamtthüringen 8: 7. 1889 – **Lectotype (designated here)**: [Germany] “Flora baltica. – / *Festuca arundin. gigantea* / × *rubra*, *F. Haussknechtii* / n. hybr. / forma *diffusior* / Mit *F. gigantea*, *arundin. rubra* / *Lol. perenne* b. Binz / an einer feuchten Stelle b. Dorfe”, Aug 1888, *C. Haussknecht s.n.* (JE barcode JE00006539 [image!]; isolectotype: JE barcode JE00006540 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=111068>

= *Festuca ×haussknechtii* f. *strictior* Torges in Mitt. Geogr. Ges. (Thüringen) Jena, Mitt. Bot. Vereins Gesamtthüringen 8: 7. 1889 – **Lectotype (designated here)**: [Germany] “Flora baltica. / *Festuca gigantea* × *rubra* n. hybr. / *F. Haussknechtii* m. / f. *strictior* / Inter magnam parentum copiam solo tur- / foso-arenoso subhumido pratorum pr. / Bizn insulae Rügen”, 14 Aug 1888, *C. Haussknecht s.n.* (JE barcode JE00006542 [image!]; isolectotype JE barcodes JE00005153 [image!] & JE00005157 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=111071>

= *Bromus bonassorum* Bornm. in Verh. Bot. Vereins Prov. Brandenburg 74: 188. 1933 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

= *Festuca pseudogigantea* Ovcz. & Shibkova, Fl. Tadzhiksk. S.S.R. 1: 505. 1957 – Holotype?: [Tajikistan] “Jugum. Wachs, prope pagum Sary-Mazor”, 13 Jul 1932, N. Gonczarov, G. Grigorjev & V. Nikitin s.n. (LE).

The aforementioned specimen is reported by Devesa & al. (2013) to be stored at LE.

Lolium* × *holmbergii (Dörf.) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Lolium arundinaceum* (Schreb.) Darbysh. subsp. *arundinaceum* × *L. perenne* L.] = *Festuca* × *holmbergii* Dörf., Herb. Norm., Sched. Cent. 53–54: 108 (n. 5379). 1911 = × *Festulolium holmbergii* (Dörf.) P.Fourn., Quatre Fl. France: 81. 1935 = × *Schedolium holmbergii* (Dörf.) Holub in Preslia 70: 112. 21 Jun 1998 = × *Schedolium holmbergii* (Dörf.) Soreng & Terrell in Phytologia 83: 87. 27 Jul 1998 (“August 1997”) – **Lectotype (designated here)**: [Sweden] “HERBARIUM NORMALE. / editum ab I. Dörfler. / 5379. *Festuca Holmbergii Dörfler*, nova hybr.! / (*Festuca arundinacea* × *Lolium perenne*) [description omitted] / Suecia. Scania. Inter parentes prope „Limhamn“ frequens”, Aug 1909 and Jul 1910, O.R. *Holmberg 5379* (JE barcode JE00005151 [image!]; isolectotypes: ARIZ barcode ARIZ-140062 [image!], B barcodes 10 0250712 [image!], 10 0250713 [image!] & 10 0250714 [image!], BRNU Nos. 350392 & 003590, DAO barcode 000465079 [image!], MPU barcode MPU027853 [image!], W Nos. 1911-0005706 [image!], 1916-0031989 [image!], 2002-0011556 [image!], 2002-011557 [image!], 2009-0016713 [image!], WU No. 040601 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=114463>

Lolium interruptum (Desf.) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** subsp. *interruptum* = *Festuca interrupta* Desf., Fl. Atlant. 1: 89. 1798 = *Brachypodium interruptum* (Desf.) Roem. & Schult., Syst. Veg. 2: 747. 1817 = *Festuca arundinacea* var. *interrupta* (Desf.) Coss. & Durieu in Durieu, Expl. Sci. Algérie 2: 170. 1855 = *Festuca elatior* var. *interrupta* (Desf.) Cout. in Bol. Soc. Brot., ser. 2, 10: 59. 1935 = *Festuca arundinacea* subsp. *interrupta* (Desf.) Tzvelev in Bot. Zhurn. (Moscow & Leningrad) 56: 1253. 1971 = *Schedonorus interruptus* (Desf.) Tvelev in Novosti Sist. Vyssh. Rast. 31: 259. 1998 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

= *Festuca fenas* Lag., Gen. Sp. Pl.: 4. 1816 = *Poa fenas* (Lag.) Steud., Syn. Pl. Glumac. 1: 252. 1854 = *Festuca elatior* var. *fenas* (Lag.) Hack. in Bot. Centralbl. 8: 407. 1881 = *Festuca arundinacea* subsp. *fenas* (Lag.) Arcang., Comp. Fl. Ital., ed. 2: 61. 1894 = *Festuca arundinacea* var. *fenas* (Lag.) Halácsy, Consp. Fl. Graec. 3: 405. 1904 = *Schedonorus arundinaceus* subsp. *fenas* (Lag.) H.Scholz in Beih. Ber. Inst.

Landschafts- Pflanzenökol. Univ. Hohenheim 16: 74. 2003 = *Lolium arundinaceum* subsp. *fenas* (Lag.) Banfi, Bracchi & Galasso in Mem. Soc. Ital. Sci. Nat. Mus. Civico Storia Milano 33(2): 8. 2005 – Neotype (designated by Fuente & al. in Taxon 52: 609. 2003): [France] Jardin du Luxembourg, 20 Jun 1823, J.E. Gay s.n. (K barcode K000912901 [image!]). — Image of neotype available at <http://apps.kew.org/herbcat/getImage.do?imageBarcode=K000912901>

Lolium interruptum subsp. *corsicum* (Hack.) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** = *Festuca elatior* subvar. *corsica* Hack., Monogr. Festuc. Eur.: 157. 1882 = *Festuca fenas* subsp. *corsica* (Hack.) K.Richt., Pl. Eur. 1: 102. 1890 = *Festuca elatior* f. *corsica* (Hack.) Fiori, Fl. Italia 4(1, app.): 27. 1907 = *Festuca interrupta* var. *corsica* (Hack.) Rouy in Rouy & Foucaud, Fl. France 14: 228. 1913 = *Festuca arundinacea* subsp. *corsica* (Hack.) Kerguélen in Bull. Soc. Bot. France 123: 320. 1976 = *Festuca arundinacea* var. *corsica* (Hack.) Kerguélen in Lejeunia 142: 22. 1993 = *Schedonorus arundinaceus* subsp. *corsicus* (Hack.) Foggi & Signorini in Willdenowia 35: 243. 2005 = *Schedonorus interruptus* subsp. *corsicus* (Hack.) Foggi in Arch. Geobot. 10: 98. 2007 – Lectotype (designated by Kerguélen in Lejeunia 110: 6. 1983): [France, Corsica] Serra di Scopamène, par Sartène. lieux humides, 3 Aug 1879, E. Reverchon s.n. (W No. 1916-0014994 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=287402>

=? *Festuca arundinacea* var. *insularis* Gennari, Sp. Fl. Sarda: 26. 1867 – Type: not designated.

The characters reported in the diagnosis of *Festuca arundinacea* var. *insularis* point to *Lolium interruptum* subsp. *corsicum*; however, the lack of type material (not found at CAG and FI) hampers the inclusion of this name among the synonyms of *L. interruptum* subsp. *corsicum*.

Lolium* × *krasanii (H.Scholz), Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Lolium arundinaceum* (Schreb.) Darbysh. subsp. *arundinaceum* × *L. multiflorum* Lam.] = × *Schedolium krasanii* H.Scholz in Kochia 2: 51. 2007 – Holotype: [Switzerland] Kanton Aargau, Aaretal, Gemeinde Schinznach-Dorf, Straßenrand, 8 Jun 2005, R. Schmid-Hollinger s.n. (B; isotype: Herb. Schmid-Hollinger).

Lolium letourneuxianum (St.-Yves) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** = *Festuca elatior* var. *letourneuxiana* St.-Yves in Candollea 1: 34. 1922 = *Festuca arundinacea* var. *letourneuxiana* (St.-Yves) Torrec. & Catalán in Syst. Bot. 27: 243. 2002 – Type: not designated.

The choice of the species rank is explained in the note regarding *Lolium*. No specimens suitable for typification purposes were located at G, LAU, MPU, and P.

= *Festuca elatior* [var. *letourneuxiana*] subvar. *pitardii* St.-Yves in Candollea 1: 34. 1922 – Type: not designated.

No specimens suitable for typification purposes were located at G and LAU.

= *Festuca elatior* [var. *letourneuxiana*] subvar. *pseudovulgaris* St.-Yves in Candollea 1: 34. 1922 – Type: not designated. No specimens suitable for typification purposes were located at G and LAU.

= *Festuca elatior* var. *cirtensis* St.-Yves in Candollea 1: 36. 1922 ≡ *Festuca arundinacea* subsp. *cirtensis* (St.-Yves) Gamisans, Cat. Pl. Vasc. Corse: 63. 1985 (n.v.) ≡ *Schedonorus arundinaceus* subsp. *cirtensis* (St.-Yves) H.Scholz & Valdés in Willdenowia 35: 243. 2005 – Original material: “Algérie. Province de Constantine: Djebel Ouahnche (herb. Joly in herb. Univ. Alg.)”.

No attempts were made to locate material suitable for typification purposes.

Lolium liangshanicum (L.Liu) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** ≡ *Festuca liangshanica* L.Liu, Fl. Reipubl. Popularis Sin. 9(2): 387. 2002 – Holotype: [China] Sichuan: Xichang, 12 Aug 1964, *Zhu Taiping* 224 (PE).

Lolium mairei (St.-Yves) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** ≡ *Festuca mairei* St.-Yves in Candollea 1: 45. 1922 ≡ *Schedonorus mairei* (St.-Yves) Dobignard in Dobignard & Chatelain, Index Syn. Fl. Afrique N. 1: 404. 2010 – Lectotype (designated by Cebolla Lozano & al. in Fontqueria 48: 81. 1997): [Morocco] M. Grand Atlas, Ourika: éboulis porphyriques et granitiques entre Abessen et le Tizi-Tachdirt, 2500–2600 m, 12 Jul 1921, *R. Maire s.n.* (G, specimen on the right; isolectotype: specimen on the left).

The choice of the species rank is explained in the note regarding *Lolium*.

Lolium mazzettianum (E.B.Alexeev) Darbysh. in Novon 3: 241. 1993 ≡ *Festuca mairei* Hack. ex Hand.-Mazz., Symb. Sin. 7: 1288. 1936, nom. illeg. (Art. 53.1 of the *ICN*), non St.-Yves in Candollea 1: 45. 1922 ≡ *Festuca mazzettiana* E.B.Alexeev in Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 82: 99. 1977 ≡ *Schedonorus mazzettianus* (E.B.Alexeev) Holub in Preslia 70: 113. 1998 ≡ *Festuca kunmingensis* B.S.Sun in Wu, Fl. Yunnan. 9: 258. 2003 (n.v.), nom. illeg. superfl. (Art. 52.1–2 of the *ICN*) – Lectotype (designated by Alexeev in Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 82: 99. 1977): [China] Yunnan Sen, talus des Uzuru, 3 Jul 1908, *P.F. Dulcoux* 867 (W No. 1916-0004628 [image!]); isolectotype: E barcode E00381938 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=246792>

Handel-Mazzetti (1936) mentioned different syntypes (besides paratypes); among these Alexeev (1977) selected the specimen at W as the lectotype.

Lolium mediterraneum (Hack.) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** ≡ *Festuca elatior* subvar. *mediterranea* Hack., Monogr. Festuc. Eur.: 154. 1882 ≡ *Festuca arundinacea* subsp. *mediterranea* (Hack.) K.Richt., Pl. Eur. 1: 102. 1890 ≡ *Festuca elatior* var. *mediterranea* (Hack.)

Gaut., Cat. Fl. Pyrénées-Orientales: 450. 1897 ≡ *Festuca elatior* f. *mediterranea* (Hack.) Fiori, Fl. Italia 4(1, app.): 27. 1907 ≡ *Festuca arundinacea* [unranked] *mediterranea* (Hack.) Rouy in Rouy & Foucaud, Fl. France 14: 226. 1913 (“race”) ≡ *Festuca mediterranea* (Hack.) Prain in Index Kew. Suppl. 5: 106. 1921 ≡ *Festuca arundinacea* subsp. *mediterranea* (Hack.) Franco & Rocha Afonso in Bol. Soc. Brot., sér. 2, 54: 88. 1980 ≡ *Lolium arundinaceum* subsp. *mediterraneum* (Hack.) Banfi, Bracchi & Galasso in Mem. Soc. Ital. Sci. Nat. Mus. Civico Storia Milano 33(2): 8. 2005 ≡ *Schedonorus arundinaceus* subsp. *mediterraneus* (Hack.) H.Scholz & Valdés in Willdenowia 35: 243. 2005 ≡ *Lolium arundinaceum* var. *mediterraneum* (Hack.) Jauzein in Biocosme Mésogéen 27: 119. 2010 – Lectotype (designated by Kerguélen in Lejeunia 110: 6. 1983): [Algeria] “Hab. in ditione urbis Alger, loco dicto la Maison Carrée in pratis humosis pascuis”, 14 May 1879, *M. Gandoger* 337 (W No. 1916-0014959 [image!]). — Image of lectotype available at <http://herbarium.univie.ac.at/database/detail.php?ID=166145>

The choice of the species rank is explained in the note regarding *Lolium*.

= *Festuca arundinacea* var. *glaucescens* Boiss., Voy. Bot. Espagne: 675. 1844 ≡ *Festuca elatior* var. *glaucescens* (Boiss.) Briq., Prodr. Fl. Corse 1: 154. 1910 ≡ *Festuca pauneroi* Cebolla, López Rodr. & Rivas Ponce in Candollea 58: 195. 2003 ≡ *Schedonorus arundinaceus* subsp. *pauneroi* (Cebolla, López Rodr. & Rivas Ponce) H.Scholz in Willdenowia 35: 243. 2005 – Lectotype (designated by Cebolla Lozano & al. in Fontqueria 48: 87. 1997): [Spain] “Hisp. merid. Inter Alhaurín et Coin. ad viam”, May 1837, *E. Boissier s.n.* (G No. 8034 432).

The epithet *pauneroi* has priority at the ranks of species and subspecies, while *glaucescens* at the rank of variety.

Lolium pluriflorum (Schult.) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** ≡ *Festuca pluriflora* Schult., Mant. 2: 402. 1824 ≡ *Festuca multiflora* C.Presl, Cyper. Gramin. Sicul.: 37. 1820, nom. illeg. (Art. 53.1 of the *ICN*), non Walter, Fl. Carol.: 81. 1788 ≡ *Festuca elatior* var. *sicula* Parl., Fl. Ital. 1: 455. 1850 ≡ *Festuca elatior* var. *multiflora* Hack. in Bot. Centralbl. 8: 407. 1881, nom. illeg. superfl. (Art. 52.1–2 of the *ICN*) ≡ *Festuca elatior* subsp. *multiflora* Arcang., Comp. Fl. Ital., ed. 2: 61. 1894 ≡ *Festuca elatior* f. *multiflora* (Arcang.) Fiori in Fiori & Paoletti, Fl. Italia 1: 92. 1896 ≡ *Festuca elatior* var. *pluriflora* (Schult.) Halácsy, Consp. Fl. Graec. 3: 404. 1904, nom. superfl. (Art. 52.3 of the *ICN*) ≡ *Schedonorus pratensis* subsp. *pluriflorus* (Schult.) H.Scholz in Beih. Ber. Inst. Landschafts- Pflanzenökol. Univ. Hohenheim 16: 75. 2003, nom. superfl. (Art. 52.3 of the *ICN*) ≡ *Schedonorus pluriflorus* (Schult.) Bergmeier & H.Scholz in Willdenowia 41: 174. 2011 – Type: not designated.

For this taxon, the epithets *pluriflorum*, *multiflorum*, and *siculum* have priority at the ranks of species, subspecies and form, and variety respectively. No attempts were made to locate material suitable for typification purposes.

Lolium pratense (Huds.) Darbysh. in Novon 3: 242. 1993 ≡ *Festuca pratensis* Huds., Fl. Angl.: 37. 1762 ≡ *Festuca fluitans* var. *pratensis* (Huds.) Huds., Fl. Angl., ed. 2, 1: 47. 1778 ≡ *Schedonorus pratensis* (Huds.) P.Beauv., Ess. Agrostogr.: 177. 1812 ≡ *Bromus pratensis* (Huds.) Spreng., Syst. Veg. 1: 359. 1824 ≡ *Bucetum pratense* (Huds.) Parn., Grass. Scotland: 105. 1842 ≡ *Festuca elatior* subsp. *pratensis* (Huds.) Čelak., Prodr. Fl. Böhmen: 51. 1867 ≡ *Festuca elatior* var. *pratensis* (Huds.) A.Gray, Manual, ed. 5: 634. 1867 ≡ *Tragus pratensis* (Huds.) Panz. ex B.D.Jacks., Index Kew. 2: 1099. 1895 – Lectotype (designated by Reveal & al. in Taxon 40: 135. 1991): [Great Britain], *Buddle s.n.*, Herb. Sloane No. 125.16 (BM-SL).

= *Festuca adscendens* Retz. in Kongl. Vetensk. Acad. Handl. 30: 245. 1769 ≡ *Festulolium adscendens* (Retz.) Asch. & Graebn., Syn. Mitteleur. Fl. 2(1): 768. 1902 – **Lectotype (designated here)**: “*Festuca adscendens*”, s.loc., s.d., s.coll. (LD barcode 1286867 [image!]). — Images of lectotype available at <http://www.botmus.lu.se/Lund/Images/1286867.jpg>; <http://www.botmus.lu.se/Lund/Images/1286867B.jpg>

Although the synflorescence appears to be contracted in the lower part, the specimen is clearly referable to *Lolium pratense*: all the spikelets have two glumes, and the synflorescence is lax, without the rachis concavities typical of the subg. *Lolium*. = *Festuca poeoides* Michx., Fl. Bor.-Amer. 1: 67: 1803 (“*poaeoides*”), nom. illeg. (Art. 53.1 of the *ICN*), non Thuill., Fl. Env. Paris, ed. 2: 51. 1799 (“*poaeoides*”) ≡ *Festuca americana* Michx. ex P.Beauv., Ess. Agrostogr.: 162. 1812 ≡ *Schedonorus americanus* (Michx. ex P.Beauv.) Roem. & Schult., Syst. Veg. 2: 706. 1817 – “*Festuca americana*” Pers., Syn. Pl. 1: 94. 1805 (“*Festuca poeoides (americana)*”), pro syn./nom. prov. inval. (Art. 36.1.(b) and 36.1.(c) of the *ICN*) – **Lectotype (designated here)**: [Canada] “*Festuca duriuscula / poeoides / Herb. de m Jussieu / fleuve S' Laurent*”, “*Festuca poeoides / Hab. in Canada 2*”, s.d., *A. Michaux s.n.* (P barcode P00680140 [image!]; isolectotype: US barcode 00624216). — Image of lectotype available at <http://mediaphoto.mnhn.fr/media/1445439299825b33CuqF4Ru7n5ReZ>

The question mark accompanying the name of Palisot de Beauvois (and the one of Roemer & Schultes), does not invalidate its publication, since it indicates a mere taxonomic doubt, which actually does not affect its acceptance by the author (Art. 36.1 of the *ICN*).

The “fragment of the type” mentioned by Piper (1906) as stored at the “Torrey Herbarium” (i.e., George Safford Torrey Herbarium, CONN) is most likely the specimen at US (which we had not the opportunity to see), which, on the basis of the transcribed label, could be regarded as an isolectotype.

Lolium scabriflorum Banfi, Galasso, Foggi, Kopecký & Ardenghi, **nom. nov.** ≡ *Festuca scabriflora* L.Liu, Fl. Reipubl. Popularis Sin. 9(2): 387. 2002, nom. illeg. (Art. 53.1 of the *ICN*), non Steud., Syn. Pl. Glumac. 1: 314. 1854 – “*Festuca scabriflora*” L.Liu, Vasc. Pl. Hengduan Mount. 2: 2174. 1994 (n.v.), nom. nud. – Holotype: [China] Yunnan: Zhongdian, 17 Aug 1981, *Hengduanshan Exped. 3111* (PE).

Lolium ×schlickumii (Grantzow) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Lolium giganteum* (L.) Darbysh. × *L. pratense* (Huds.) Darbysh.] ≡ *Festuca ×schlickumii* Grantzow, Fl. Uckermark: 340. 1880 (n.v.) ≡ *Schedonorus ×schlickumii* (Grantzow) Holub in Preslia 70: 113. 1998 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

Lolium ×subnutans (Holmb.) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Lolium multiflorum* Lam. × *L. pratense* (Huds.) Darbysh.] ≡ *Festuca ×subnutans* Holmb. in Bot. Not. 1930: 94. 1930 – Type: not designated.

No specimens suitable for typification purposes were located at LD and GB.

Lolium tuberosum (Romero Zarco & Cabezudo) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** ≡ *Micropyropsis tuberosa* Romero Zarco & Cabezudo in Lagasalia 11: 95. 1983 – Holotype: In arenosis humidis loco dicto “El Martinazo”, Parque Nacional de Doñana (Huelva, España), 13 May 1966, *Galiano & Novo s.n.* (SEV barcode SEV66232; isotypes: MA, MAF, MAG).

Natural intergeneric hybrids

×*Festulolium hercynicum* (Wein) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Festuca rubra* L. × *Lolium pratense* (L.) Darbysh.] ≡ *Festuca ×hercynica* Wein in Repert. Spec. Nov. Regni Veg. 6: 354. 1909 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

×*Festulolium pseudofallax* (Wein) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Festuca ovina* L. × *Lolium pratense* (L.) Darbysh.] ≡ *Festuca ×pseudofallax* Wein in Repert. Spec. Nov. Regni Veg. 6: 353. 1909 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

×*Festulolium wippaense* (Wein) Banfi, Galasso, Foggi, Kopecký & Ardenghi, **comb. nov.** [*Festuca heterophylla* Lam. × *Lolium pratense* (L.) Darbysh.] ≡ *Festuca ×wippaensis* Wein in Repert. Spec. Nov. Regni Veg. 6: 354. 1909 – Type: not designated.

No attempts were made to locate material suitable for typification purposes.

Nomina nuda, excludenda, and/or artificial hybrids

×*Bromofestuca cojocnensis* Prodan in Bul. Grad. Bot. Univ. Cluj 16 (1936): 93. 1937 [*Bromopsis erecta* (Huds.) Fourr. × *Lolium arundinaceum* (Schreb.) Darbysh.] – Type: not designated.

Although described as a natural hybrid between *Bromopsis erecta* and *Lolium arundinaceum*, according to the protologue with annexed picture, in our opinion this taxon falls within the diversity range of *Bromopsis erecta*. On the other hand, the genetic compatibility between *Bromopsis* and *Lolium* seems quite unlikely, as they belong to distantly correlated monophyla, respectively supertribes Triticoideae T.D.Macfarl. & L.Watson and Pooideae L.Liu (Soreng & al., 2015).

No attempts were made to locate herbarium material suitable for typification; we do not regard the illustration within the protologue as a safe element for this purpose.

×*Festulolium colinii* Cugnac & A.Camus ex A.Camus in Bull. Soc. Bot. France 91: 16. 1944 (“*Colini*”) [*Lolium pratense* (Huds.) Darbysh. ♂ × *L. temulentum* L. ♀] – Type: not designated.

Artificial hybrid (Cugnac & Camus, 1944). No attempts were made to locate herbarium material suitable for typification; we do not regard the illustration within the protologue as a safe element for this purpose.

“×*Festulolium frederici*” Cugnac & A.Camus in Bull. Soc. Bot. France 91: 19. 1944, nom. nud. (Art. 39.1 of the *ICN*) [*Festuca rubra* L. × *Lolium perenne* L.].

“×*Festulolium frederici*” Cugnac & A.Camus, the only “authentic” ×*Festulolium*, is based on a previous description in German (without name) by Nilsson (1933), thus it is not validly published (Art. 39.1 of the *ICN*). It is a spontaneous hybrid (Nilsson, 1933), yet we did not find any herbarium specimen suitable for its validation. This plant is reported by Stace (2010) to be known in the wild only from Sweden; previous records from Great Britain are erroneous

“×*Festulolium nilssonii*” Cugnac & A.Camus in Bull. Soc. Bot. France 91: 19. 1944, nom. nud. (Art. 39.1 of the *ICN*) [*Lolium giganteum* (L.) Darbysh. ♂ × *L. multiflorum* Lam. ♀].

– “×*Schedololium nilssonii*” Soreng & Terrell in Phytologia 83: 87. 1998, nom. nud. (a putative new combination based on a nom. nud.).

– “×*Schedolium nilssonii*” Stace in Watsonia 27: 247. 2009, nom. nud. (a putative new combination based on a nom. nud.).

“×*Festulolium nilssonii*” Cugnac & A.Camus is based on a previous description in German (without name) by Nilsson (1930), thus it is not validly published (Art. 39.1 of the *ICN*). It is an artificial hybrid (Nilsson, 1930).

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