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Authors: Greuter, Werner, and Raab-Straube, Eckhard Von

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WERNER GREUTER¹ & ECKHARD VON RAAB-STRAUBE^{1*} (ed.)**Euro+Med Notulae, 5****Abstract**

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This is the fifth of a series of miscellaneous contributions, by various authors, where hitherto unpublished data relevant to the Euro+Med (or Sisyphus) Project are presented. This instalment deals with the families *Betulaceae*, *Chenopodiaceae*, *Leguminosae*, *Plumbaginaceae*, *Portulacaceae*, *Ranunculaceae*, *Salicaceae* and *Gramineae*, including new country and area records for taxa of *Avena*, *Chamaecytisus* (*Cytisus*), *Dichanthium*, *Eragrostis*, *Festuca*, *Holcus*, *Poa* and *Portulaca*, and the validation of names in the genera *Alnus*, *Anemonastrum*, *Dactylis*, *Homalotrichon*, *Limonium*, *Salix* and *Salsola*.

Additional key words: Europe, Mediterranean area, vascular plants, taxonomy, distribution

Notice

A succinct description of the Euro+Med Project, with a list of recognised territories and their abbreviations, and the conventions used to indicate the status and presence of taxa, can be found in the introduction to the first instalment (Greuter & Raab-Straube 2005: 223–226) and on the Euro+Med Plantbase website (Euro+Med 2006+). As of 30.4.2011, Euro+Med Plantbase provides access to 135 families, corresponding to approximately 85 % of the Euro-Mediterranean flora of vascular plants. For the previous instalment of the Euro+Med Notulae, see Greuter & Raab-Straube (2009).

The following have contributed entries to the present instalment: Z. Barina, K. Baumann, M. Breitfeld, A. Danin, G. Domina, H. Freitag, D. Pifkó, T. Raus, M. Ristow, H. Scholz, A. Sennikov, P. Uotila and B. Valdés.

Betulaceae

Alnus alnobetula subsp. *crispa* (Aiton) Raus, **comb. nov.** ≡ *Betula crispa* Aiton, Hort. Kew. 3: 339. 1789 ≡ *Alnus viridis* subsp. *crispa* (Aiton) Turrill in Bot. Mag. 173:

382. 1962 ≡ *Duschekia crispa* (Aiton) Pouzar in Preslia 36: 339. 1964.

Alnus alnobetula subsp. *fruticosa* (Rupr.) Raus, **comb. nov.** ≡ *Alnus fruticosa* Rupr. in Beitr. Pflanzenk. Russ. Reiches 2: 53. 1845 ≡ *Alnus viridis* subsp. *fruticosa* (Rupr.) Nyman, Consp. Fl. Eur.: 672. 1881 ≡ *Duschekia fruticosa* (Rupr.) Pouzar in Preslia 36: 339. 1964.

Alnus alnobetula subsp. *sinuata* (Regel) Raus, **comb. nov.** ≡ *Alnus viridis* var. *sinuata* Regel in Bull. Soc. Imp. Naturalistes Moscou 38: 422. 1865 ≡ *Alnus sinuata* (Regel) Rydb. in Bull. Torrey Bot. Club 24: 190. 1897 ≡ *Alnus viridis* subsp. *sinuata* (Regel) Á. Löve & D. Löve in Univ. Colorado Stud., Ser. Biol. 17: 20. 1965 ≡ *Duschekia sinuata* (Regel) Pouzar in Preslia 36: 339. 1964.

According to Pouzar (1982) and Holub (1986), *Alnus viridis* (Chaix) DC. is based on *Betula viridis* Chaix (1785, in Villars 1786; for bibliographical details see Perret & Burdet 1981), a name preceded by *B. alnobetula* Ehrh. (Ehrhart 1783; for bibliographical details see

¹ Botanischer Garten und Botanisches Museum Berlin-Dahlem, Freie Universität Berlin, Königin-Luise-Str. 6–8, 14195 Berlin, Germany; *e-mail: e.raab-straube@bgbm.org (author for correspondence), w.greuter@bgbm.org

Manitz 1975). That is why the taxon's correct name in *Alnus* is *A. alnobetula* (Ehrh.) K. Koch (first invalidly published as a synonym of *A. ovata* (Schränk.) Lodd. in Hartig 1843: 372, later validated by Koch 1872). From a nomenclatural point of view, this affects all infraspecific taxa of the species accepted and keyed out on subspecific level in circumpolar basic floras (Tutin & al. 1993; Morin & al. 1997), necessitating the above combinations in addition to the Corsican endemic, *A. alnobetula* subsp. *suaveolens* (Req.) Lambinon & Kerguélen (Lambinon & Kerguélen 1988). *A. alnobetula* subsp. *alnobetula* (syn. *A. viridis* subsp. *viridis*) is endemic to the mountains of Central Europe and the Balkan Peninsula. The N Eurasian-NW North American *A. alnobetula* subsp. *fruticosa* is, in Europe, confined to Arctic Russia and the Urals E of 45°W and N of 60°30'N (Komarov 1936; see also map V-47 in Tolmachev & al. 2000: 138, under *Alnaster fruticosa* (Rupr.) Ledeb.). *A. alnobetula* subsp. *crispa* from NE North America and Greenland and *A. alnobetula* subsp. *sinuata* from NW North America are both reported to be planted for shelter in Iceland, the Faroe Islands and Scandinavia, locally frequently so (Jonsell 2000); they may escape from cultivation.

Th. Raus

Chenopodiaceae

The heterogeneity of the traditional genus *Salsola* has been known for some time (e.g., Freitag & Rilke 1997, Kadereit & al. 2003). Akhiani & al. (2007) dismembered *Salsola* on the basis of molecular results. However, for the time being, a broad generic concept is followed in Euro+Med Plantbase, because no consensus on a subdivision of the genus has yet been reached, and because of missing information on the appropriate placement in the new segregates for some of the taxa involved. Likewise, the genus *Bassia* has been treated in a wide sense. For a molecular-based new classification see Kadereit & Freitag (2011). We thank Alexander Sennikov for nomenclatural advice.

P. Uotila & H. Freitag

Salsola boissieri* subsp. *serpentinicola (Freitag & Özhatay) Freitag & Uotila, **comb. nov.** = *Salsola canescens* subsp. *serpentinicola* Freitag & Özhatay in *Willdenowia* 27: 185. 1997. – A new combination is needed because *Salsola canescens* (Moq.) Boiss., Fl. Orient. 4: 963. 1879, is a later homonym of *Salsola canescens* Pers., Syn. Pl. 1: 296. 1805. The new name *S. boissieri* was introduced by Botschantzev (1968: 1442), who believed that the earlier name *S. canescens* Desf., Tabl. École Bot.: 41. 1804 was validly published, whereas in fact *S. canescens* Desf. appears in an enumeration of garden plants without any associated descriptive matter. Therefore, *S. boissieri* was rejected as nomen superfluum by Freitag (in Freitag & Rilke 1997: 231). However, both Botschantzev and Freitag overlooked *S. canescens* Pers. (Syn. Pl. 1: 296. 1805), which was neither included in Index Kewensis nor in IPNI, but had already been detected by Greuter & al.

(1984: 308). Although *S. canescens* Pers. is a superfluous substitute for *Chenopodium sinense* Willem. (today's *Chenolea diffusa* Thunb.) and therefore illegitimate, it is validly published and thus an earlier homonym of *S. canescens* (Moq.) Boiss. Consequently *S. boissieri* must be considered the correct name.

P. Uotila & H. Freitag

Leguminosae

Chamaecytisus leiocarpus (A. Kern.) Rothm. (*Cytisus leiocarpus* A. Kern.) – Flowers of *Chamaecytisus leiocarpus* are all arranged in leafy racemes, the shoots are covered with appressed hairs and the legume is glabrous. Based on this combination of features, the taxon is clearly distinct from all other *Chamaecytisus* taxa with flowers exclusively or partly arranged in leafy racemes. The flowers of two subspecies of the related *C. triflorus* (Lam.) Skalická (*Chamaecytisus hirsutus* auct. non (L.) Link), subsp. *ciliatus* (Wahlenb.) Holub and subsp. *falcatus* (Waldst. & Kit.) Pifkó, are arranged in racemes and their legumes are glabrous, but the shoots are either covered with patent hairs or glabrescent. The legume is also glabrous in *C. supinus* subsp. *alpestris* (Schur) Pifkó, which has patent hairs on the shoots (Pifkó 2009). The related *C. ratisbonensis* (Schaeff.) Rothm. and *C. elongatus* (Waldst. & Kit.) Link also have flowers in leafy racemes and shoots covered with appressed hairs, but their legumes are densely hairy.

+ **Mk:** Former Yugoslav Republic of Macedonia: W slope of Jakupica Mts, above village Belica, in rocky pine forest, 689 m, 41.6867°N, 21.3143°E, 7.2.2010, Z. Barina & D. Pifkó 17701 (BP). – New to the country. Micevski (2001) does not discuss this name nor any of its synonyms. *Chamaecytisus leiocarpus* occurs in the NE part of the Balkan Peninsula and in the adjacent part of the Carpathian Basin: in Bulgaria (Kuzmanov 1976), in Bosnia and Herzegovina (Beck 1887; as *Cytisus ciliatus* var. *bosniacus* Beck), in Serbia (Diklić 1972) and in the southwestern part of Romania (Oprea 2005).

? **Al:** A record of *Chamaecytisus leiocarpus* from Albania is included in Flora Europaea (Heywood & Frodin 1968); however, its basis is unknown. Later mentions from Albania (Greuter & al. 1989; Cristofolini 1991; Qosja & al. 1992) are presumably based on that work and also lack mention of localities. The line drawings in the Albanian Floras (Demiri 1983; Qosja & al. 1992) lack essential details and, anyway, are just copies of those in the Bulgarian Flora (Kuzmanov 1976: 83). In the herbaria revised by us (BEO, BEOU, BP, KRA, KRAM, SO, SOM) and those revised by Cristofolini (1991), no specimens of *C. leiocarpus* (or originally determined as *C. leiocarpus*) have been found, and we could not confirm the presence of the species in Albania during our field trips to the country from 2004 until today.

- ? **Tu(E)**: The only record from Turkey (Cristofolini 1991) should also be treated as questionable because of doubt on the precise origin of the only herbarium specimen from “Turkey (Trakya!)”, because the territory of formerly Turkish Thrace extends to today’s Bulgaria, Turkey, Greece and the Former Yugoslav Republic of Macedonia. Gibbs (1969) does not mention the taxon from Turkey.
- **Gr**: The report from Greece is erroneous. The single Greek record (Cristofolini 1991) is based on a reference to Flora Europaea (Heywood & Frodin 1968) where, however, the species is not mentioned from Greece.
- **Uk(U)**: There is a single record of this taxon from Ukraine (Fodor 1974), repeated later by Yakovlev & al. (1996) and Kagalo (1999). However, the only specimen (collected in 1966, at Onokivci, Zakarpattia Oblast) determined as *C. leiocarpus* in the herbarium of István Fodor (at UU) proved to be *C. ratisbonensis* (Schaeff.) Rothm. (rev. Pifkó 2007).
D. Pifkó & Z. Barina

Plumbaginaceae

Pollen-stigma dimorphism and self-incompatibility are common within *Statioideae* and widespread in *Limonium*. Facultative apomixis is common in *Limonium*, whereas truly sexual species are infrequent. Hybridisation, apomixis and polyploidy are putative key factors in the radiation of *Limonium* in the Mediterranean basin (Artelari & Georgiou 2003; Cowan & al. 1998; Erben 1979; Lledó & al. 2005). As a consequence, more than 400 microspecies and a large number of hybrids have been described from the Mediterranean area. According to the current trend in *Limonium* classification, it is appropriate to consider the taxa below at specific rather than subspecific rank.

G. Domina

Limonium afrum (Pignatti) Domina ≡ *Limonium delicatulum* subsp. *afrum* Pignatti in Collect. Bot. (Barcelona) 6: 308. 1962.

Limonium ammophilon (Papatsou & Phitos) Domina ≡ *Limonium graecum* subsp. *ammophilon* Papatsou & Phitos in Notes Roy. Bot. Gard. Edinburgh 34: 203. 1975.

Limonium gallicum (Pignatti) Domina ≡ *Limonium delicatulum* subsp. *gallicum* Pignatti in Collect. Bot. (Barcelona) 6: 316. 1962. – Type gathering: Soc. Dauphinoise No. 1817; lectotype (designated here): “*Statice ovalifolia* Poir., Ile d’Aix (Char.-Inf.)”, 26.7.1875. A. Guillon in Société Dauphinoise 1817 (FI [fototeca 2635/A!]; isolecotype: FI [fototeca 2635!]).

Limonium maroccanum (Batt. & Trab.) Domina ≡ *Statice tubiflora* var. *maroccana* Batt. & Trab. in Bull. Soc. Hist. Nat. Afrique N. 9: 15. 1918. ≡ *Limonium tubiflorum*

subsp. *maroccanum* (Batt. & Trab.) Maire & Weiller in Bull. Soc. Hist. Nat. Afrique N. 27: 244. 1936.

Limonium romanum (Täckh. & Boulos) Domina ≡ *Limonium sinuatum* subsp. *romanum* Täckh. & Boulos in Publ. Cairo Univ. Herb. 5: 90. 1974.

Limonium zanonii (Pamp.) Domina ≡ *Statice tubiflora* var. *zanonii* Pamp. in Nuovo Giorn. Bot. Ital., ser. 2, 24: 148. 1917 ≡ *Limonium tubiflorum* subsp. *zanonii* (Pamp.) Brullo in Webbia 33: 142. 1978.

Portulacaceae

Since my first publication on the *Portulaca oleracea* complex (Danin & al. 1978), I have tried to determine every *Portulaca* specimen I came across, using the keys in Danin & Reyes-Betancort (2006), Danin & al. (2008), and Danin & al. (2011). Many of my determinations remain unpublished, most of which, when relevant to the Euro+Med area, are assembled here. An in-depth description of my research on *P. oleracea* can be found on the website: <http://flora.huji.ac.il/browse.asp?action=specie&specie=POROLE>.

From the random sample of Euro-Mediterranean collections of *Portulaca oleracea* aggr. studied by me, derived from several hundred populations, one may draw the following preliminary conclusions. The most common microspecies is *P. granulatostellulata*, recorded from 28 territories. Second is *P. trituberculata* (24 territories). The status of occurrence is still poorly understood. In the following list, the taxa have been considered as native when there is no evidence to the contrary. Native (including archaeophytic) status is supported by early findings of *P. trituberculata* in Germany in the 4th century AD. (Danin & al. 1978). New findings from the Po Valley near Ferrara (Bosi & al. 2009; and unpublished data) support such early presence. The introduction and extinction of microspecies of the *P. oleracea* aggr. is a dynamic processes, far from being fully understood.

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A. Danin

Portulaca canariensis Danin & Reyes-Betancort

+ **Ca(C)**: Canary Islands (Spain): Gran Canaria, Agüimes, Barranco de Agüimes, 24.3.1978, I. Kukkonen 9733 (H).

+ **Ca(G)**: Canary Islands (Spain): La Gomera, Chejelpes, 4.4.2007, A. Kurtto & L. Helynranta (H).

Portulaca cypria Danin

+ **Ag**: Algeria: City of Algiers, centre, 13.8.2006, A. Zeddám (B); Algiers, Institut Agronomique, 28.8.2006, A. Zeddám (B).

- + **Co**: Corsica: Entre Ajaccio et la Cove de Povata, 19.7.1900, *E. Burnat, J. Briquet & F. Cavillier* (G).
- + **Eg**: Egypt: Cairo, 5.11.1982, *M. A. Monier* 4278 (E).
- + **Ir**: Israel: Philistean Plain, Rehovot, 28.1.2011, *A. Danin* (HUI); Judean Mts, Jerusalem, 10.10.2005, *A. Danin* (HUI).
- + **Sy**: Syria: Palmyra, 3.8.1944, *Mouterde* 8268 (G).

Portulaca granulatostellulata (Poelln.) Ricceri & Arrigoni

- + **Ag**: Algeria: Algiers, Institut National Agronomique, 28.8.2006, *A. Zeddami* (B); Algiers, Hydra, 28.8.2006, *A. Zeddami* J77 (B).
- + **Au(A)**: Austria: Niederösterreich, Dep. Breitenau, 8.9.1992, *J. Walter* (WU); Wien, 28.7.1975, *J. Walter* (WU).
- + **Az(J)**: Azores (Portugal): São Jorge, Calheta, 28.6.1938, *C. Cedercantz* (H).
- + **Co**: Corsica (France): Aléria, 7.2004, *J.-M. Tison* (HUI); 12.7.2000, *C. Dobes* (herb. C. Dobes).
- + **Ct**: Croatia: Korčula, Lumbarda, 22.6.1971, *K. Kaleva* 1241 (H); Istria, Cres / Nerezio, 9.8.1997, *J. Walter* (herb. J. Walter).
- + **Eg**: Egypt: Cairo, American University, 2.7.2009, *M. Hassan EG-04* (B); southern Egypt, Safaga, 29.10.2009, *M. Hassan EG-25* (B); Giza, on the Nile bank, 2.6.1965, *M. El Mahdi* (G).
- A Fe**: Finland: Ta. Janakkala, Turenki, 7.8.1959, *H. Niininen* (H); Obu. Kemi, Laitakari, 19.7.1914, *V. Räsänen* (H).
- + **Ga(F)**: France: Alpes-Maritimes, Mandelieu, 9.2000, *J.-M. Tison* (HUI); Var, Hyères, 9.2000, *J.-M. Tison* (HUI).
- + **Gg**: Georgia: Tbilisi, 27.8.2000, *G. Schneeweiß* (herb. G. Schneeweiß).
- + **Gr**: Greece: Macedonia, Grevena – Kozani, 18.8.1976, *W. Greuter* 14477 (G); Athens airport, 7.10.2004, *A. Danin* Gr2004Aa (HUI).
- + **He**: Switzerland: Alpes Lemaniennes, 7.9.1904, *J. Briquet* (G); Genève, 10.9.1970, *Terretaz* 2021 (G).
- + **Hu**: Hungary: Zala, Karmacs, Keszthely, 27.9.2010, *P. Uotila* 48917 (H).
- + **Ir**: Israel: Esdraelon Plain, Afula, 7.11.2005, *A. Danin* (HUI); Philistean Plain, Gan Yavne, 29.7.2005, *A. Danin* (HUI).
- + **Md(M)**: Madeira (Portugal): Ponta de San Lorenzo, cono volcanico, 14.9.2004, *A. Reyes-Betancort & A. Santos* (HUI).
- + **Po**: Poland: Kornik, 8.2007, *Boratyński* (HUI).
- + **Rf(C)**: Russia: Moscow region, Orekhovo-Zuevo distr., Krutoe, 10.9.1983, *I. V. Ivanova* (MW).
- + **Sk**: Slovakia: Muránska planina plateau, Tisovec, 18.8.2009, *D. Blánár* (herb. Blánár); Slovenské rudohorie, Lubeník, railway station, 18.8.2009, *D. Blánár* (herb. Blánár).
- + **Sl**: Slovenia: Portorož, 16.9.1983, *A. Leskinen* (H).

- + **Sr**: Serbia: Beograd, Botanical Garden, 10.9.2004, *A. Danin* (HUI); Deliblato, 8.9.2004, *A. Danin* (HUI); Pessara, 8.9.2004, *A. Danin* (HUI); Kladovo, 12.9.2009, *P. Uotila* 48316 (H); Đerdap gorge near Golubac, 12.9.2009, *P. Uotila* 48316 (H); Maljen, Divičbare, 9.9.2009, *P. Uotila* 48278a (H); Šumadija, Lajkovac, 9.9.2009, *P. Uotila* 48280 (H); Niš, 14.9.2009, *P. Uotila* 48423 (H).
- A Su**: Sweden: Blekinge, Sälvesborg, 1.8.1936, *B. Holmgren* (H).
- + **Tu(A)**: Turkey: B3 Eskişehir, Eskişehir, Anadolu University campus, 29.6.2007, *A. Danin* (HUI); A2(A) Istanbul, Istanbul, Bostancı, 1.7.2007, *A. Danin* (HUI); C2 Muğla, c. 10 km SE of Köyceğiz, Beyobasi, 19.5.1990, *P. Uotila* 37854 (H).
- + **Tu(E)**: Turkey-in-Europe: A1(E) Kırklareli, Babae-ski, 1.7.2007, *A. Danin* (HUI); A1(E) Çanakkale, Gelibolu, 3.7.2007, *A. Danin* (HUI).

Portulaca nicaraguensis (Danin & H. G. Baker) Danin

- D Az(J)**: Azores (Portugal): São Jorge, Calheta, 3.7.1938, *C. Cedercantz* (H).
- D Ca(G)**: Canary Islands (Spain): La Gomera, Valle Gran Rey, 5.4.2007, *A. Kurtto & L. Helynranta* (H), *ibid.*, 7.4.2007, *A. Kurtto & L. Helynranta* (H). – For the Macaronesian islands, this predominantly North and Central American taxon was hitherto only known from Tenerife (Danin & Reyes-Betancort 2006).

Portulaca nitida (Danin & H. G. Baker) Ricceri & Arrigoni

- + **Ag**: Algeria: Algiers, Brossette, 14.9.2006, *A. Zeddami* (B); Algiers, Hydra, 29.8.2006, *A. Zeddami* (B).
- + **Au(A)**: Austria: Wien XII, 25.6.2003, *J. Walter* (WU); Salzburg, 15.9.2002, *P. Pilsl* (herb. Pilsl).
- + **Be(B)**: Belgium: Liège, 9.10.1989, *J. Rousselle* (H).
- + **Cg**: Montenegro: Miločer, 1.7.1973, *J. Jalas* 2428 (H).
- + **Ct**: Croatia: Istria, Inner-Istria, SSE Lupoglav, 4.9.2003, *W. Starmühler* (herb. Starmühler); Istria, 15.10.1998, *W. Starmühler* (herb. Starmühler).
- + **Eg**: Egypt: Cairo, American University, 2.7.2009, *M. Hassan EG-08* (B); Giza, on the Nile bank, 2.6.1965, *M. El Mahdi* (G).
- A Fe**: Finland: Ab. Sauvo, Karuna, Voilahti, 17.9.1999, *L. Hörkö* (H); N. Pernaja, Isnäs, Labby, 20.9.2003, *P. Alanko* 119799 (H); N. Helsinki, Kaivopuisto, 20.9.1995, *C. af Forselles* (H).
- + **Ga(F)**: France: Allier, Chassenard, 22.9.1961, *A. Charpin* (G).
- + **Ge**: Germany: Bayern, Passau, Platz bei der Nibelungenhalle, 27.8.2003, *M. Hohla* (WU).
- + **Gr**: Greece: Athens airport, 7.10.2004, *A. Danin* (HUI); Mesogia, 10 km N of Athens Airport, 7.10.2004, *A. Danin* (HUI); Grammatiko, 7.10.2004, *A. Danin* (HUI).
- + **He**: Switzerland: Genève, 8.1877, *E. Ayasse* (G).

- + **Ir:** Israel: Hula Plain, Kibbutz Dan, 25.7.2005, *A. Danin* (HUI); Philistean Plain, Gan Yavne, 29.7.2005, *A. Danin* (HUI).
- + **Md(M):** Madeira (Portugal), 25.8.2004, *A. Reyes-Betancort* (HUI).
- + **Po:** Poland: Kornik, 8.2007, *Boratyński* (HUI).
- + **Rf(C):** Russia: Tambov province, Kirsanov, railroad bed near Kirsanov station, 3.7.1997, *A. Sukhorukov* (MW).
- + **Rf(S):** Russia: Kalmykia, Chernoziemsky, 24.7.1964, *V. Pavlov* (MW).
- + **Tu(A):** A2(A) Istanbul, Istanbul, Bostancı, 1.7.2007, *A. Danin* (HUI).
- + **Tu(E):** Turkey-in-Europe: A1(E) Kırklareli, Babae-ski, 1.7.2007, *A. Danin* (HUI); A1(E) Çanakkale, Gelibolu, 3.7.2007, *A. Danin* (HUI).

Portulaca oleracea L. s.str. [= *P. stellata* (Danin & H. G. Baker) Ricceri & Arrigoni]

- A **Fe:** Finland: Sa. Imatra, Neitsytniemi, 10.1999, *K. Rutanen* (H).
- + **Ga(F):** France: Bouches-du-Rhône, Fontvieille, 10.2001, *J.-M. Tison* (HUI).
- + **Ge:** Germany: Rheinland-Pfalz, Rheinhessen, Mainz-Mombach, 20.8.1978, *H. Kahlheber* (H).
- + **He:** Switzerland: Genève, 8.1877, *E. Ayasse* (G); Plan-tae Helvetiae et Sabaudiae, 1864, *H. Bernet* (G).
- + **Hu:** Hungary: Budapest, 3.10.2010, *P. Uotila 49008* (H).
- + **Ir:** Israel: N Negev, Arad, 15.10.1981, *A. Danin* (HUI).
- + **Lu:** Portugal: 16.6.1998, *J. Walter* (herb. Walter); Beira Alta, 12.9.1984, *M. Luceño* (UC).
- + **Po:** Poland: Kornik, 8.2007, *Boratyński*, (HUI); N Poland, Torun-Bielany, 20.9.1979, *M. Ceynowa-Gieldon 337* (H).
- + **Si(M):** Malta: NW of Mellieħa, 24.10.1974, *L. Y. T. Westra & J. V. Rooden* (E).
- + **Tu(E):** Turkey-in-Europe: A2(E) Istanbul, Kumburgaz, 2.7.2007, *A. Danin* (HUI); A1(E) Edirne, İpsala, 2.7.2007, *A. Danin* (HUI); A1(E) Çanakkale, Ge-libolu, 3.7.2007, *A. Danin* (HUI).

Portulaca papillatostellulata (Danin & H. G. Baker) Danin

- + **Ag:** Algeria: Algiers, Zéralda, 19.11.2005, *A. Zeddami* (B).
- + **Au(A):** Austria: Niederösterreich, Breitenau, 8.9.1992, *J. Walter* (WU); Wien, 9.9.1992, *J. Walter* (WU).
- + **Co:** Corsica (France): 5.7.2000, *C. Dobes* (herb. C. Dobes).
- A **Fe:** Finland: Al. Finström, Godby, 8.1980, *P. Johanson* (H); N. Helsinki, Kaisaniemi, 5.9.1984, *P. Alanko 49584* (H).
- + **Gr:** Greece: Macedonia, Halkidiki, Sithonia Peninsula, Sarti, 4.7.1997, *M. Koistinen 1997/275* (H).
- + **Hu:** Hungary: Zala, Karmacs, 27.9.2010, *P. Uotila 48906* (H).

- + **Ir:** Israel: N Negev, Arad, 15.10.1981, *A. Danin* (HUI).
- + **It:** Italy: Toscana, Valle Bandetta, c. 15 km E of Livorno, 13.9.2007, *A. Danin* (HUI); Toscana, Gabbro, c. 15 km SE of Livorno, 13.9.2007, *A. Danin* (HUI); Lazio, Rome, “Ateneo Pontificio Regina Apostolorum”, 15.9.2007, *A. Danin* (HUI); Toscana, Elba, 9.2007, *A. Reyes-Betancort* (HUI).
- + **Rf(C):** Russia: Lipetsk oblast, Usman, 11.9.1917, *P. Smirnov* (MW).
- + **Sk:** Slovakia: Bratislava IV–Devín, Námestie práce square, 20.8.2010, *V. Feráková* (herb. V. Feráková); Malé Karpaty Mts., castle Červený Kameň near Častá, 16.9.2010, *V. Feráková* (herb. V. Feráková).
- + **Tu(A):** Turkey: A2(A) Istanbul, Istanbul, Bostancı, 1.7.2007, *A. Danin* (HUI).
- + **Tu(E):** Turkey-in-Europe: A1(E) Kırklareli, Babaeski, 1.7.2007, *A. Danin* (HUI).

Portulaca rausii Danin

- + **Ag:** Algeria: Algiers, centre, 13.8.2006, *A. Zeddami* (B).
- + **Gr:** Greece: Attiki, Elefsis, 27.5.1939, *H. Lindberg* (H).
- + **Tu(A):** Turkey: B1 Aydın, Ephesos, 18.8.2004, *J. Walter* (herb. J. Walter).
- + **Tu(E):** Turkey-in-Europe: A1(E) Kırklareli, Lüleburgaz, 1.7.2007, *A. Danin* (HUI).

Portulaca sativa Haw.

- C **Fe:** Finland: N. Helsinki, Viikki, Institute of Horticulture, cultivated, 19.9.1969, *P. Alanko 14153* (H); N. Helsinki, Kaisaniemi, Bot. Garden, 11.9.1913, *V. Pesola* (H).
- C **Tu(A):** Turkey: Erzurum, seed bought from bazar in 1972, cult. in Finland, Helsinki, 4.9.1972, *P. Uotila 21090* (H).

Portulaca trituberculata Danin, Domina & Raimondo

- + **Ag:** Algeria: Algiers, Hussein Dey, 6.9.2006, *A. Zeddami* (B); Algiers, Brossette, 13.8.2006, *A. Zeddami* (B).
- + **Au(A):** Austria: Wien, 7.8.1995, *J. Walter* (WU); Niederösterreich, Gramatneusiedl, 15.8.1994, *W. Rehak* (WU).
- + **Co:** Corsica: Entre Ajaccio et la Cave de Povata[?], 19.7.1900, *E. Burnat, J. Briquet & F. Cavillier* (G).
- + **Eg:** Egypt: New Cairo, 30.6.2009, *M. Hassan EG-01* (B).
- N **Fe:** Finland: Ta. Hattula, Tenhola, 30.7.2005, *P. Uotila 45687* (H).
- + **Ga(F):** France: Isère, Heyrieux, 9.2000, *J.-M. Tison* (HUI); Bas-Rhin, Roppenheim, 13.8.1994, *A. Schneider* (H).
- + **Gr:** Greece: Macedonia, Grevena–Kozani, 18.8.1976, *W. Greuter 14477* (G); Mani Peninsula, 22.11.1991, *Kit Tan & G. Vold 10666* (G); 4 km from Paralia Tirou to Leonidion, 10.9.1997, *Kit Tan & A. Strid 18712* (HUI); Athens airport, 7.10.2004, *A. Da-*

- nin* (HUJ); Mesogia, 10 km N of Athens airport, 7.10.2004, A. Danin (HUJ).
- + **He**: Switzerland: Valais, 27.9.1897, P. Cheneverd (G); Vaud, 24.8.1929, O. Meylan (G).
 - + **Ho**: Netherlands: Gelderland, Wilp, 18.7.1955, W. C. van Heurn (H).
 - + **Hu**: Hungary: Zala, Karmacs, 27.9.2010, P. Uotila 48909 (H); Veszprem. Egyházaskesö, 29.9.2010, P. Uotila 48961 & al. (H).
 - + **Ir**: Israel: Sharon Plain, Netanya, 14.10.2005, A. Danin (HUJ); Judean Mts, Jerusalem, 10.10.2005, A. Danin (HUJ).
 - + **It**: Italy: Toscana, Pisa, 13.9.2007, A. Danin (HUJ); Lazio, Rome, "Ateneo Pontificio Regina Apostolorum", 15.9.2007, A. Danin (HUJ).
 - + **Ma**: Morocco: Sidi Hamed el Sunni, 15.7.1929, F. Quer 122 (G).
 - + **Po**: Poland: Kornik, 8.2007, Boratyński (HUJ).
 - + **Rf(C)**: Russia: Kursk city, 1906, V. Alyekhin (MW).
 - + **Rm**: Romania: Dobrogea, 1971, V. Feráková 27 (Herb. V. Feráková).
 - + **Si(M)**: Malta: Gnien Ingraw, just NW of Mellieħa, 24.10.1974, L. Y. T. Westra & J. V. Rooden 204 (G).
 - + **Sn**: Egypt: Sinai, 1930, A. Kaiser 853 (G).
 - + **Sr**: Serbia: Beograd, 10.9.2004, A. Danin (HUJ); Beograd, Kalemegra, 5.9.2004, A. Danin (HUJ); Niš–Dobrič Valley, 14.9.2009, P. Uotila 48451 (H).
 - + **Sy**: Syria: Damascus, 28.5.1951, H. Pabot (G); Baniyas, 22.10.1953, H. Pabot (G).
 - + **Tu(A)**: Turkey: B3 Eskişehir, Eskişehir, Anadolu University campus, 29.6.2007, A. Danin (HUJ); A2(A) Istanbul, Istanbul, Bostancı, 1.7.2007, A. Danin (HUJ); A1(A) Çanakkale, Denizkent, shore of the Sea of Marmara, 22.7.1981, P. Uotila 30390 (H); A2(A) Bursa, İznik Gölü, 10 km E of İznik, 21.7.1981, K. Hormia 453 (H).
 - + **Tu(E)**: Turkey-in-Europe: A1(E) Kırklareli, Babae-ski, 1.7.2007, A. Danin (HUJ); A1(E) Çanakkale, Gelibolu, 3.7.2007, A. Danin (HUJ).

Portulaca zaffranii Danin

- + **Ag**: Algeria: Algiers, city centre, 19.11.2005, A. Zeddam (B).
- + **Gr**: Greece: Mesogia, 10 km N of Athens airport, 7.10.2004, A. Danin (HUJ).
- + **It**: Italy: Emilia-Romagna, Lugo (RA), Parco del Loto, 5.8.2010, G. Bosi 34 (MOD).
- + **Sy**: Syria: Damascus, 24.6.1927, G. von Frenckell (H).
- + **Tu(A)**: Turkey: B3 Eskişehir, Eskişehir, Anadolu University campus, 29.6.2007, A. Danin (HUJ).
- + **Tu(E)**: Turkey-in-Europe: A1(E) Edirne, Keşan, 3.7.2007, A. Danin (HUJ).

Ranunculaceae

Anemonastrum narcissiflorum subsp. *crinitum* (Juz.)

Raus, **comb. nov.** ≡ *Anemone crinita* Juz. in Komarov,

Fl. URSS 7: 739. 1937 ≡ *Anemone narcissiflora* subsp. *crinita* (Juz.) Kitag., in Rep. Inst. Sci. Res. Manchoukuo 3, App. 1.: 213. 1939.

= *Anemone biarmiensis* Juz. in Komarov, Fl. URSS 7: 738. 1937 ≡ *Anemonastrum biarmiense* (Juz.) Holub in Folia Geobot. Phytotax. 12: 428. 1977 ≡ *Anemone narcissiflora* ["*narcissifolia*"] subsp. *biarmiensis* (Juz.) Jalas in Ann. Bot. Fenn. 25: 297. 1988.

Anemonastrum narcissiflorum subsp. *fasciculatum* (L.)

Raus, **comb. nov.** ≡ *Anemone fasciculata* L., Sp. Pl.: 542. 1753 ≡ *Anemonastrum fasciculatum* (L.) Holub in Folia Geobot. Phytotax. 8: 165. 1973 ≡ *Anemone narcissiflora* subsp. *fasciculata* (L.) Ziman & Fedor. in Ziman & al., Taxon. & Evol. *Anemone narcissiflora* complex: 34. 1997.

= *Anemone umbellata* Willd., Sp. Pl. 2: 1284. 1799.

= *Anemone speciosa* Adams ex Pritz. in Linnaea 15: 685. 1841 ≡ *Anemonastrum speciosum* (Pritz.) Galushko, Fl. Severn. Kavkaza Vopr. Ist. 3: 56. 1979.

= *Anemone narcissiflora* var. *willdenowii* Boiss., Fl. Orient. 1: 14. 1867 ≡ *Anemone narcissiflora* subsp. *willdenowii* (Boiss.) P. H. Davis in Notes Roy. Bot. Gard. Edinburgh 26: 175. 1965.

= *Anemone narcissiflora* subsp. *chrysantha* Ulbr. in Bot. Jahrb. Syst. 37: 266. 1906 ≡ *Anemone chrysantha* (Ulbr.) Grossh., Fl. Kavkaza 2: 105. 1930.

= *Anemone impexa* Juz. in Komarov, Fl. URSS 7: 737. 1937 ≡ *Anemonastrum impexum* (Juz.) Holub in Folia Geobot. Phytotax. 8: 165. 1973.

Fischer & al. (2008) and Buttler & Hand (2008), based on Ehrendorfer & Samuel (2001), accept that the generic segregation of *Hepatica* Mill. and *Pulsatilla* Mill. from *Anemone* L. s.l., as commonly accepted (Komarov 1937; Greuter & al. 1989; Tutin & al. 1993), necessitates the same procedure for *Anemonastrum* Holub in order to allow for taxonomic consistency. According to the recent in-depth revision of infraspecific taxa in *Anemone* sect. *Omalocarpus* DC. by Ziman & al. (2005), *Anemonastrum narcissiflorum* (L.) Holub is represented in the Euro+Med area by three subspecies, viz. subsp. *narcissiflorum* in Central and S Europe from N Spain to SW Ukraine (Jalas & Suominen 1989: 80, map 1638) including the Crimea (Ziman & al. 2005: 294), subsp. *fasciculatum* in N and E Asia Minor (Davis 1965: 135) and the Caucasus (Russia, Georgia and Armenia; see maps 39 & 40 in Grossheim 1950 under *Anemone fasciculata*, *A. impexa* and *A. speciosa*), and subsp. *crinitum* at its westernmost distribution limit in the Urals (mapped by Jalas & Suominen 1989; the total range of the latter subspecies extending through the whole of Siberia eastwards to Kamchatka and N Japan, Ziman & al. 2005: 295-296). Subspecific (plus ancillary varietal) instead of specific rank for taxa within the *Anemonastrum narcissiflorum* complex proves appropriate since they exhibit sufficient geographical separation (Hultén 1986: 1049–1050, map

829) being at the same time connected by numerous transitional forms, probably due to parallel radiations into similar habitats (Ehrendorfer 1995). Th. Raus

Salicaceae

Salix pentandrifolia Sennikov, **nom. nov.** = *Salix skvortsovii* Sennikov in Komarovia 4: 140. 2006, non Y. L. Chang & Y. L. Chou (in Chou & al. 1955: 86 [n.v.]) [– *Salix pentandroides* A. Skvortsov in Feddes Repert. Spec. Nov. Regni Veg. 64: 73. 1961, nom. inval. (Art. 37.1 of the Code; McNeill & al. 2006), non *S. pentandroides* Rouy in Rev. Bot. Syst. Géogr. Bot. 2: 168. 1904]. – Holotype: Russia, “Caucasus septentr., Balkaria, in ripa rivuli Baschyl-sugusu, alt. 1950 m”, 1.9.1939, *R. Elenevsky* (MW).

Salix skvortsovii Sennikov was published as a new species name because the previous name used for this species, *S. pentandroides* A. Skvortsov, was found not to be validly published, with two types designated. It was dedicated to Alexei K. Skvortsov (1920–2008), the renowned Russian taxonomist of willows. Unfortunately, at that time I overlooked the existence of the earlier name *S. skvortzovii* Y. L. Chang & Y. L. Chou, which was dedicated to another Russian botanist with the same surname, Boris V. Skvortsov (1896–1980), who worked e.g. in Manchuria in NE China and used to transliterate his name as “Skvortzov”. The combinations of letters “tz” and “ts” stay for the same Russian letter “ц” and have identical pronunciation, the first following the traditions of German (the dominant language of scientific writing and transliteration in B. Skvortsov’s times), the second, contemporary English style.

Following a request by Irina Belyaeva, the Nomenclature Committee for Vascular Plants recommended that *Salix skvortsovii* and *S. skvortzovii* be considered as confusingly similar and treated as homonyms (Brummitt 2009: 291). For this reason, a new name is needed for the Caucasian representative of the *Salix pentandra* L. group, distinguished by A. Skvortsov on the basis of its narrow and acute (not broad and obtuse) leaf-buds and concolorous leaves. A. Sennikov

Gramineae

Avena fatua subsp. *cultiformis* Malzev

+ **Po**: Poland: N edge of Warthebruch, NW of Jenin, c. 0.5 km N of the main road, field, 52°42'06.2"N, 15°06'02.8"E, 40 m, 26.6.2010, *M. Ristow* 460/10 (B); edge of Warthetal, N above Santok, c. 1.2 km W of Warthe bridge, field border with *Tordylium maximum*, *Cyanus segetum*, *Cota tinctoria* and *Consolida regalis*, 52°44'05.6"N, 15°23'30.9"E, 40 m, 27.6.2010, *M. Ristow* 482/10 (B). – “This subspecies is closely related to *A. sativa* subsp. *orientalis* possibly being either a fatuoid mutation of the latter subspecies or its hybrid with *A. fatua* s.l.” (Tzvelev 1983: 350). M. Ristow & H. Scholz

Dactylis glomerata subsp. *merinoana* (Horjales & al.) H. Scholz, **comb. nov.** = *Dactylis izcoi* subsp. *merinoana* (“*merinoiana*”) Horjales & al. in Nova Acta Ci. Compostelana, Biol. 18: 166. 2010.

Dactylis glomerata subsp. *stebbinsii* (Horjales & al.) H. Scholz, **comb. nov.** = *Dactylis juncinella* subsp. *stebbinsii* (“*stebbinis*”) Horjales & al. in Nova Acta Ci. Compostelana, Biol. 17: 81. 2009.

Dichanthium annulatum (Forssk.) Stapf

P Ca(F): Canary Islands (Spain): Fuerteventura, Costa Calma, centre of the village, 11.2008, *H. Langbehn* (B). – Second record from the Canary Islands. In this region first collected in 1998 in Tenerife (Cruz & al. 2008). Naturalised in, e.g. Madeira, Crete and countries of N Africa and the Near East. H. Scholz

Eragrostis tenuifolia (A. Rich.) Steud.

A Ca(F): Canary Islands (Spain): Fuerteventura, Costa Calma, centre of the village, 11.2008, *H. Langbehn* (B). – A species of probably African origin, now widespread throughout the Tropics. Also known from Madeira. H. Scholz

Festuca brachyphylla Schult. & Schult. f.

+ **Su**: Sweden: Torne Lappmark; Fjäll, gravel- and moorplain between Alesjaurestugorne and Tjåktjastugan, c. 35 km SW of Abisko, 750–1000 m, 21.8.1990, *R. W. Bussmann* (STU). – The area of this fescue extends from Svalbard and N Norway to the arctic parts of European and Asian Russia. H. Scholz

Holcus rigidus Hochst.

A Ge: Germany, N. Bavaria: Construction site of a new highway bridge W of Waldau (5935), 12.7.2010, *M. Breitfeld* (UBT). – An endemic of the Azores, this species had never before been recorded as a casual alien. M. Breitfeld & H. Scholz

Homalotrichon pubescens subsp. *longifolium* (Boiss.)

H. Scholz & Valdés, **comb. nov.** = *Avenula pubescens* var. *longifolia* Boiss., Fl. Orient. 5: 545. 1884 = *Avenula pubescens* subsp. *longifolia* (Boiss.) H. Scholz & Valdés in Willdenowia 36: 662. 2006 = *Helictotrichon pubescens* subsp. *longifolium* (Boiss.) Doğan in Notes Roy. Bot. Gard. Edinburgh 40: 86. 1982.

Poa poiformis (Labill.) Druce (*Arundo poiformis* Labill.; “*P. caespitosa*” auct. non G. Forst.; “*P. labillardierei*” auct. non Steud.).

P Ge: Germany, Hesse: Frankfurt-Niedereschbach, fallow land on Homburger Landstraße (5717/44), 140 m, 3.7.1991, *H. Kramer* 91/45 (FR, 2 specimens). – For this densely tufted perennial from Australia,

compare Walsh & al. (2009: 335). Perhaps the records of *Poa labillardierei* Steud. from the British Isles, as a wool casual (Ryves & al. 1996), also belongs here. K. Baumann & H. Scholz

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