Notulae ad floram euro-mediterraneam pertinentes No. 26

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Euro+Med Notulae, 4

Abstract

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This is the fourth of a series of miscellaneous contributions, by various authors, where hitherto unpublished data relevant to the Euro+Med (or Sisyphus) Project are presented.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 *Chenopodiaceae, Compositae, Orobanchaceae* and *Gramineae,* including new country and area records for taxa of *Allagopappus, Anacyclus, Andryala, Aristida, Avena, Brachypodium, Cenchrus, Cladanthus, Digitaria, Eragrostis, Helichrysum, Megathyrsus, Panicum, Pennisetum, Pulicaria, Salicornia, Schizogyne, Senecio, Taraxacum* and *Triticum,* and the validation of names in the genera *Andryala, Elymus, Hieracium, Koeleria, Neoschischkinia, Orobanche, Pilosella, Secale* and *Senecio.*

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; emended in Greuter & Raab-Straube 2006: 707). It is not repeated here. Please note that for the territory of France ("Ga" in the sense of Flora Europaea), now the following subdivisions may be used:

Ga(C): Channel Islands
Ga(F): mainland France
Ga(M): Monaco

The Notulae provide on one hand the opportunity to validate new scientific names and combinations that are required under the recommended taxonomic classification but do not yet exist. On the other hand, they permit to document distributional data that have not yet been published in print – both new records and the correction of old erroneous ones. The author of each entry is either named at its end or, in the case of uncommented new combinations, is acknowledged as the author of the combination.

The full treatments of the families dealt with here (plus *Rosaceae* and 28 minor ones) can be consulted via the Euro+Med Plantbase website (Euro+Med 2006+).

In May 2008, Euro+Med Plantbase became part of PESI (A Pan-European Species directories Infrastructure; http://www.eu-nomen.eu/pesi/), together with Fauna Europaea and the European Register for Marine Species (ERMS). PESI is a three-year project, funded by the European Union under the 7th Framework Programme (grant agreement no. 223806). Euro+Med Plantbase also regularly receives additions and corrections from the International Cichorieae Network (ICN 2009+), an initiative of the European Distributed Institute for Taxonomy (EDIT; http://www.e-taxonomy.eu/), an EU Network of Excellence project in the 6th Framework Programme (project no. 018340).

The following have contributed entries to the present instalment: S. Bräutigam, G. Domina, G. Gottschlich, W.

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Chenopodiaceae

Salicornia obscura P. W. Ball & Tutin

– Da, Ge, No: The records of *Salicornia obscura* (Ball & Akeroyd 1993: 122; "W. Europe") are not correct for those three countries. In my opinion, after seeing the Nordic herbarium material for the treatment of the genus in Flora Nordica (Piirainen 2001: 50–54), the records from Denmark and Norway relate to *S. europaea* L. s.str. As to the record from Germany, Dahmen & Wisskirchen (1998: 448) accepted only two diploid taxa in the country (*S. europaea* subsp. *europaea* and subsp. *brachystachya* (G. Mey.) Dahmen & Wissk. = *S. appressa* Dumort.) and included *S. obscura* in the synonymy of the latter. As my knowledge of the German populations is not profound enough, I accept their choice; though I think that also this record is more likely to refer to *S. europaea* than to *S. appressa*. However, the taxonomy of *S. europaea* aggr. is still very confused and badly needs a modern revision.
M. Piirainen

Salicornia procumbens Sm.

– No: The record of *Salicornia procumbens* from Norway (Ball & Akeroyd 1993: 123; as *S. dolichostachya* Moss subsp. *dolichostachya*) is not correct. It relates in fact to *S. pojarkovae* N. Semenova, which was included in the synonymy of this taxon by Ball & Akeroyd. I have seen the relevant herbarium material for the treatment of this genus in Flora Nordica (Piirainen 2001: 50–54), and found no indication for the occurrence of this taxon in Norway.
M. Piirainen

Compositae

Allagopappus canariensis (Willd.) Greuter

? **Ca(H):** This species, more generally known under the name *Allagopappus dichotomus* Cass., has been reported from El Hierro by Hansen & Sunding (1993: 34-35). This record has not been confirmed in other floristic works (Santos-Guerra, unpubl.; Stierstorfer & Gaisberg 2006: 39) and must be considered as doubtful.
A. Santos-Guerra & J. A. Reyes-Betancort

Anacyclus radiatus Loisel. subsp. ***radiatus***

+ Ca(H): Hierro: Road El Golfo to Sabinosa, 13.5.1949, *Sventenius 18074* (ORT); Tamaduste, near the village, 9.5.1949, *Sventenius 18104* (ORT). – These are the first records for El Hierro.
A. Santos-Guerra & J. A. Reyes-Betancort

Anacyclus radiatus subsp. ***coronatus*** (Murb.) Humphries

+ Ca(F): Fuerteventura: La Oliva, 4.4.1955, *Sventenius 21538* (ORT). – The first record for Fuerteventura, where the plant appears to be very rare.
A. Santos-Guerra & J. A. Reyes-Betancort

Andryala glandulosa Lam.

– Ca(F, L): *Andryala glandulosa* Lam. was mentioned as occurring on the eastern Canary Islands by Bramwell & Bramwell (2001: 366). Hansen & Sunding (1993: 34-35) and Acebes & al. (2004: 103), based on earlier literature, record two subspecies for the Canary Islands: *A. glandulosa* subsp. *glandulosa* from Lanzarote, and subsp. *cheiranthifolia* (L'Hér.) Greuter (under the illegitimate name *A. glandulosa* subsp. *varia* R. Fern.) from Lanzarote and Fuerteventura. Both subspecies were originally described from the Madeira archipelago. The plants occurring in Lanzarote and Fuerteventura, however, do not belong to *A. glandulosa* but, on account of their growth form and the absence of receptacular scales, to the Canary Island endemic *A. pinnatifida* Aiton. In view of some differences between the eastern and western plants of that species, such as the presence, in the former, of outer involucral bracts that enclose the flowers, we consider them as two different subspecies (see the following entry).
A. Santos-Guerra & J. A. Reyes-Betancort

Andryala pinnatifida subsp. ***buchiana*** (Sch. Bip.) Reyes-Bet. & A. Santos, **stat. nov.** ≡ *Andryala pinnatifida* f. *buchiana* Sch. Bip. in Webb & Berthelot, Phytogr. Canar. 2: 415. 1849–50.

+ Ca(F, L): The E Canarian plants formerly assigned to *Andryala glandulosa* and its two subspecies (see above) belong to *A. pinnatifida* subsp. *buchiana.*
A. Santos-Guerra & J. A. Reyes-Betancort

Cladanthus mixtus (L.) Chevall.

+ Ca(G): La Gomera: path between Degollada del Zorradillo and Inchereda, 21.4.1966, *Sventenius 6152* (ORT); Hermigua, near tunnel, 700 m, 18.5.1959, *Sventenius 6133* (ORT). – These are the first records for La Gomera.
A. Santos-Guerra & J. A. Reyes-Betancort

Helichrysum orientale (L.) Vaill.

A **Ca(C, L):** Bolle (1892: 243) recorded *Helichrysum orientale* from Lanzarote, "El Sobaco" (suggesting that it might have escaped from a garden), and Gran Canaria (as a rare wild plant). It appears that it is no longer cultivated on Lanzarote (where just possibly it might have been confused with the endemic *H. gossypinum* Webb, known to occur in the same area), nor has it been observed again on the Canary Islands after Bolle's time. At best, on

both islands, it may be considered as a casual alien. A. Santos-Guerra & J. A. Reyes-Betancort

Hieracium froelichianum subsp. ***fariniceps*** (Besse & Zahn) Gottschl., **comb. nov.** ≡ *Hieracium beauverdianum* subsp. *fariniceps* Besse & Zahn in Reichenbach, Icon. Fl. Germ. Helv. 19(2): 252. 1910 ≡ *Hieracium epimedium* subsp. *subfariniceps* Zahn in Engler, Pflanzenr. 77: 806. 1921, nom. illeg. ≡ *Hieracium macilentum* subsp. *fariniceps* (Besse & Zahn) Greuter in Willdenowia 37: 164. 2007.

Hieracium froelichianum subsp**.** ***macilentiforme*** (Murr & Zahn) Gottschl., **comb. nov.** ≡ *Hieracium juranum* subsp. *macilentiforme* Murr & Zahn in Koch, Syn. Deut. Schweiz. Fl., ed. 3: 1879. 1901 ≡ *Hieracium macilentum* subsp. *macilentiforme* (Murr & Zahn) Zahn in Neue Denkschr. Allg. Schweiz. Ges. Gesammten Naturwiss. 40: 645. 1906 ≡ *Hieracium macilentiforme* (Murr & Zahn) Prain, Index Kew., Suppl. 4: 115. 1913 ≡ *Hieracium epimedium* subsp. *macilentiforme* (Murr & Zahn) Zahn in Engler, Pflanzenr. 77: 802. 1921.

Hieracium froelichianum subsp. ***pseudexilentum*** (Besse & Zahn) Gottschl., **comb. nov.** ≡ *Hieracium beauverdianum* subsp. *pseudexilentum* Besse & Zahn in Neue Denkschr. Allg. Schweiz. Ges. Gesammten Naturwiss. 40: 643. 1906 ≡ *Hieracium pseudexilentum* (Besse & Zahn) Prain, Index Kew., Suppl. 4: 119. 1913 ≡ *Hieracium epimedium* subsp. *pseudexilentum* (Besse & Zahn) Zahn in Engler, Pflanzenr. 77: 803. 1921 ≡ *Hieracium macilentum* subsp. *pseudexilentum* (Besse & Zahn) Greuter in Willdenowia 37: 164. 2007.

Hieracium juranum subsp. ***angliciforme*** (Zahn) Greuter, **comb. nov.** ≡ *Hieracium mougeotii* subsp. *angliciforme* Zahn in Engler, Pflanzenr. 75: 186. 1921 ≡ *Hieracium vogesiacum* subsp. *angliciforme* (Zahn) O. Bolòs & Vigo, Fl. Països Catalans 3: 1106. 1996.

Hieracium juranum subsp. ***valerianifolium*** (Arv.-Touv. & Gaut.) Greuter, **comb. nov.** ≡ *Hieracium valerianifolium* Arv.-Touv. & Gaut. in Bull. Herb. Boissier 5: 727. 1897 ≡ *Hieracium olivaceum* subsp. *valerianifolium* (Arv.-Touv. & Gaut.) Zahn in Engler, Pflanzenr. 75: 189. 1921.

Hieracium levicaule subsp**.** ***membranulatum*** (Litv. & Zahn) Greuter, **comb. nov.** ≡ *Hieracium vulgatum* subsp**.** *membranulatum* Litv. & Zahn in Repert. Spec. Nov. Regni Veg. 4: 239. 1907 ≡ *Hieracium membranulatum* (Litv. & Zahn) Üksip in Komarov, Fl. SSSR 30: 229. 1960.

Hieracium maranzae subsp. ***izzense*** (Gottschl.) Greuter, **comb. nov.** ≡ *Hieracium neoplatyphyllum* subsp. *izzense* Gottschl. in Stapfia 89: 142. 2009.

Hieracium maranzae subsp. ***malacofloccosum*** (Gottschl.) Greuter, **comb. nov.** ≡ *Hieracium neoplatyphyllum* subsp. *malacofloccosum* Gottschl. in Stapfia 89: 142. 2009.

Hieracium maranzae subsp. ***trimontanum*** (Gottschl.) Greuter, **comb. nov.** ≡ *Hieracium neoplatyphyllum* subsp. *trimontanum* Gottschl. in Stapfia 89: 142. 2009.

Hieracium neodivergens Gottschl., **nom. nov.** ≡ *Hieracium divergens* Nägeli & Peter, Hierac. Mitt.-Eur. 2: 332. 1889 [non Boreau 1857].

Hieracium pilosum subsp. ***monophorum*** (Zahn) Gottschl., **comb. nov.** ≡ *Hieracium morisianum* subsp. *monophorum* Zahn in Engler, Pflanzenr. 75: 86. 1921.

Hieracium sparsiramum subsp. ***draconis*** (Zahn) Gottschl., **comb. nov.** ≡ *Hieracium subglaberrimum* subsp. *draconis* Zahn in Engler, Pflanzenr. 75: 57. 1921.

Hieracium sparsum subsp. ***eufiedleri*** (Nyár. & Zahn) Greuter, **comb. nov.** ≡ *Hieracium pisaturense* subsp. *eufiedleri* Nyár. & Zahn in Bul. Grăd. Bot. Univ. Cluj 13: 66. 1933.

Hieracium transiens subsp. ***heterodontoidiforme*** (Zahn) Greuter, **comb. nov.** ≡ *Hieracium erythrocarpum* subsp. *heterodontoidiforme* Zahn in Věstn. Tiflissk. Bot. Sada 21: 8. 1912.

Hieracium valdepilosum subsp. ***ctenodontopsis*** (Wilczek & Zahn) Greuter, **comb. nov.** ≡ *Hieracium porrectum* subsp. *ctenodontopsis* Wilczek & Zahn in Bull. Murith., Soc. Valais. Sci. Nat. 42: 190. 1925.

Hieracium valdepilosum subsp. ***macroporrectum*** (Romieux & Zahn) Greuter, **comb. nov.** ≡ *Hieracium porrectum* subsp. *macroporrectum* Romieux & Zahn in Bull. Soc. Bot. Genève 14: 117. 1923.

Hieracium valdepilosum subsp. ***metallorum*** (Hayek) Greuter, **comb. nov.** ≡ *Hieracium jurassiciforme* var. *metallorum* Hayek, Fl. Steiermark 2(1): 789. 1914 ≡ *Hieracium porrectum* subsp. *metallorum* (Hayek) Zahn in Ascherson & Graebner, Syn. Mitteleur. Fl. 12(2): 193. 1931.

Pilosella macranthiformis (Zahn) S. Bräut. & Greuter, **comb. nov.** ≡ *Hieracium leptophyton* subsp. *macranthiforme* Zahn in Allg. Bot. Z. Syst. 7: 113. 1901 ≡ *Hieracium tephrocephalum* subsp. *macranthiforme* (Zahn) Zahn in Engler, Pflanzenr. 82: 1437. 1923 ≡ *Hieracium macranthiforme* (Zahn) Gottschl. in Stapfia 89: 66. 2009.

Pulicaria arabica subsp. ***hispanica*** (Boiss.) Murb. [= *P. paludosa* Link].

N **Ca(T):** Tenerife: Anaga, road to El Batán, 24.6.2004, *Reyes-Betancort 37598* (ORT); Tegueste, path to La Orilla, 300 m, 20.6.2000, *Santos 36351* (ORT);

ibid., La Orilla, 650 m, 1.7.1983, *Santos 28951* (ORT); Santa Cruz, Bco. Bufadero, *Santos* (obs.). – First records for the Canary Islands. The mention of *Pulicaria vulgaris* Gaertn. for Tenerife (Santos-Guerra 1988: 349; Hansen & Sunding 1993: 54-55) is an error for the present taxon.

A. Santos-Guerra & J. A. Reyes-Betancort

Pulicaria undulata (L.) C. A. Mey.

– **Ca(F):** Given from Fuerteventura by Bolle (1892: 242) as *Francoeuria crispa* var. *indica* DC., this species has not been recorded again from that island. We consider Bolle's record as an error for *Pulicaria burchardii* Hutch. subsp. *burchardii,* then not yet described. By analogy, Gamal-Eldin (1981: 285) considered a record of *P. crispa* var. *indica* from the Cape Verde Islands as due to confusion with *P. burchardii* subsp. *longifolia* Gamal-Eldin.

E **Ca(C):** Records of *Pulicaria undulata* from Gran Canaria are substantiated by specimens in BM, FI-W, TUB (Gamal-Eldin 1981: 262) and ORT, all of which originate from the same locality, Maspalomas. The species was last collected there on 15.8.1956 (*Sventenius 29226,* ORT), but has now likely disappeared due to the massive tourist development of the Maspalomas area.

A. Santos-Guerra & J. A. Reyes-Betancort

Schizogyne glaberrima DC.

? **Ca(T):** A report of this species from Tenerife (Hansen & Sunding 1993: 54–55) is in need of confirmation, as it might refer to a glabrescent form of the common *Schizogyne sericea* (L. f.) DC.

A. Santos-Guerra & J. A. Reyes-Betancort

Schizogyne sericea (L. f.) DC.

? **Ca(F):** Although mentioned by Berthelot (1840: 6) and subsequent authors (Hansen & Sunding 1993: 54–55) as present on Fuerteventura, its occurrence on that island has not been confirmed recently. We therefore consider its presence as doubtful.

A. Santos-Guerra & J. A. Reyes-Betancort

Senecio bollei Sunding & G. Kunkel

– **Ca(L):** *Senecio bollei,* firstly described from Fuerteventura as *S. rhombifolius* Bolle, nom. illeg., was subsequently recorded from the Famara massif of Lanzarote by Burchard (1929: 204-205), and was thereafter considered an endemic of the eastern Canary Island (Hansen & Sunding 1993: 54-55; Bramwell & Bramwell 2001: 352; Acebes & al. 2004: 134). However the plants from Lanzarote, including Burchard's gatherings, are distinct from *S. bollei*. We consider them to belong to the highly polymorphic *S. leucanthemifolius* complex. In *S. bollei* all leaves are petiolate, whereas in *S. leucanthemifolius* s.l. only the lowermost are petiolate. We therefore consider *S. bollei* as endemic to Fuerteventura.

A. Santos-Guerra & J. A. Reyes-Betancort

Senecio incrassatus Lowe

+ **Ca(P):** La Palma: Villa de Mazo, near Punta La Laja, 30.4.1996, *Santos 32707* (ORT); Las Goteras beach, 5.2003, *Santos 37002* (ORT). – The first record for the island.

A. Santos-Guerra & J. A. Reyes-Betancort

Senecio ilsae A. Santos & Reyes-Bet., **nom. nov.** ≡ *Senecio flaccidus* Bolle in Bonplandia 8: 134. 1860 [non Less. 1830]. – Lectotype (designated here): Gomera, in convalle Sancti Sebastiani, 4.4.1845, *Bourgeau 843* (FI-W 102666!; iso-: P 437405!). – Named after Dr Ilse Mendoza-Heuer for her contributions to the knowledge of the Canarian Flora.

+ **Ca(G):** La Gomera: Arguamul, Fuente de la Playa, 22.5.1958, *Sventenius 5281* (ORT); Argaga beach, 21.3.1959, *Sventenius 5278* (ORT); Chejelipes, 350 m, 28.3.1959, *Sventenius 5281* (ORT); Taguluche, 800 m, 13.5.1959, *Sventenius 5291* (ORT); Barranco de Argaga, 24.4.1966, *Sventenius 5296* (ORT); Hermigua, el desembarcadero, 26.4. 1966, *Sventenius 5297* (ORT); Barranco Taguluche, path to Taguluche, 7.5.1968, *Sventenius 5299* (ORT); Cresta E Barranco de Avalo, 12.2.1978, *Fernández Galván 26732* (ORT); Puntallana, 13.2.1978, *Fernández Galván 26733* (ORT); ibid., 1.4.1998, *Santos 30717* (ORT); Aguajilva, *Fernández Galván 26532* (ORT); near Roque Cano, 300-400 m, 9.3.1997, *Santos 33948* (ORT); Bco. La Villa, San Sebastián, 26.6.2001, *Santos 39142* (ORT). – *Senecio ilsae,* endemic to La Gomera, is intermediate between *S. glaucus* subsp. *coronopifolius* (Maire) C. Alexander and *S. leucanthemifolius* Poir. We do not believe that it is closely related to *S. bollei,* as Burchard (1929: 204) and Sunding & Kunkel (1972: 51) suggested. It can be distinguished by its leaves with few, entire, wide lobes. The lectotype specimen in FI-W is in good agreement with the original description, according to which the leaves are but slightly sinuate. In wild populations of this species, individuals with divided leaves are found, a feature not mentioned by Bolle. In the protologue this species is also reported from "Handia" (Jandia) on Fuerteventura, but that record was, we believe, based on poorly developed individuals of *S. leucanthemifolius* s.l.

A. Santos-Guerra & J. A. Reyes-Betancort

Senecio massaicus (Maire) Maire

+ **Ca(C, T):** Tenerife: Granadilla, between the main road and Montaña Pelada, 20.1.2001, *Santos 39067* (ORT); Arona, Los Cristianos, 31.8.2006, *Reyes-Betancort & Padrón 38858* (ORT). Gran Canaria:

Maspalomas, 31.3.1953, *Sventenius 8378* (ORT); ibid., 20.3.1947, *Sventenius 8380* (ORT); ibid., 15.8.1956, *Sventenius 8374, 8375* (ORT); La Isleta, 12.3.1971, *Sventenius 8377* (ORT). – These are first records for Gran Canaria and Tenerife.

A. Santos-Guerra & J. A. Reyes-Betancort

Senecio teneriffae Bolle

+ **Ca(P):** La Palma: El Paso, between Cumbrecita and Riscos de los Cuervos, 1500 m, 29.4.1996, *Santos 32568* (ORT); ibid., 17.3.1992, *Santos 31522* (ORT). – Bramwell & Bramwell (2001: 352) consider this species to occur on all of the Canary Islands, but provide no details; Hansen & Sunding (1993: 56–57) do not include La Palma (nor Lanzarote or Fuerteventura) in the known distribution of the species, so that ours is the first substantiated record for La Palma.

A. Santos-Guerra & J. A. Reyes-Betancort

Taraxacum collarispinulosum Uhlemann

+ **Da:** Denmark, Århus, Viby, Åhavevej, at Åhave sports ground, 56°08'10"N, 10°09'40"E, road verge, 25.4. 2004, *Øllgaard & Brandt-Pedersen HØ-04-17* (herb. Øllgaard); Århus, Brabrand, at the supermarket City Vest, 56°09'11"N, 10°08'03"E, verge with bushes, 25.4.2004, *Øllgaard & Brandt-Pedersen HØ-04-34* (herb. Øllgaard). – This is the first record of the species from outside of Germany.

H. Øllgaard

Taraxacum puolannei Puol.

+ **Da:** Denmark, Resenbro, Jyllandsringen, at the parking ground, 56°10'34"N, 9°39'48"E, sandy lawn, 2.5.2009, *Øllgaard HØ-09-035-039* (herb. Øllgaard). – The species is otherwise known from the countries surrounding the Baltic Sea, from Latvia through N Russia and Finland to Sweden.

H. Øllgaard

Orobanchaceae

Recent phylogenetic studies by Schneeweiss & al. (2004[a]) using ITS sequences suggest that *Orobanche* L. is not monophyletic but consists of two clades: the first includes *O.* sect. *Trionychon* Wallr., *O.* sect. *Gymnocaulis* Nutt. and *O.* sect. *Myzorrhiza* (Phil.) Beck; the second, *O.* sect. *Orobanche* and some species of *Diphelypaea* Nicolson. The taxonomic position of *Conopholis* Wallr., *Epifagus* Nutt., *Boschniakia* C. A. Mey. ex Bong. and *Cistanche* Hoffmanns. & Link is still problematic (Schneeweiss & al. 2004[a]; Manen & al. 2004). Furthermore the anomalous placement of *Cistanche* (see Schneeweiss & al. 2004[a], 2004[b]) suggests that *Orobanche* s.l. might have to be further split into *Aphyllon* Mitch., *Myzorrhiza* Phil., *Phelipanche* Pomel and *Boulardia* F. W. Schultz (= *Ceratocalyx* Coss.). On this basis, and taking into account different basic chromosome numbers (Schneeweiss & al. 2004[b]) and morphological differences, several new nomenclatural combinations have been published. Also, some new species have been described under *Phelipanche* (e.g., by Carlón & al. 2005, 2008).

However, studies based on RAPD (Román & al. 2003) and plastid DNA sequences – *rps2* (dePamphilis & al. 1997), *matK* (Young & al. 1999) and *rbcL* (Nickrent & al. 1998; Manen & al. 2004; Park & al. 2007) – suggest deviating relationships among the taxa belonging to *Orobanche* sect. *Orobanche* and *O.* sect. *Trionychon,* arranging them differently in the resulting cladograms.

The question of a natural classification of the complex is thus still open, and molecular data, at present, provide firmer support to inclusion of *O.* sect *Orobanche* and *O.* sect. *Trionychon* in the same genus than to generic segregation. We therefore share the opinion of Crespo & Pujadas (2006) and consider the genus *Orobanche* in a wide sense, including the four traditional sections in the circumscription of Beck (1930). The two new combinations proposed below result from this choice.

G. Domina

Orobanche schultzioides (M. J. Y. Foley) Domina, **comb. nov.** ≡ *Phelipanche schultzioides* M. J. Y. Foley in Bot. Chron. (Patras) 19: 7. 2008.

Orobanche tricholoba (Reut.) Domina, **comb. nov.** ≡ *Phelypaea tricholoba* Reut. in Candolle, Prodr. 11: 10. 1847 ≡ *Orobanche aegyptiaca* var. *tricholoba* (Reut.) Beck in Biblioth. Bot. 19: 103. 1890.

Gramineae

Aristida adscensionis L.

A **Ca(P):** Canary Islands: La Palma, LP 138 Air Port, Mazo, street border near end of the landing lane, great and dense population, 20.8.2009, *Otto 15446* (herb. Otto). – This annual species, casually introduced to La Palma, is often confused with the perennial *Aristida coerulescens* Desf. It is indigenous to Fuerteventura and Lanzarote.

R. Otto & H. Scholz

Avena byzantina K. Koch

D **Ca(P):** Canary Islands: La Palma, San Isidro, street border, 2.9.2009, *Otto 15504* (herb. Otto). – A cultigen derived from *Avena sterilis* L. in the Mediterranean area.

R. Otto & H. Scholz

Brachypodium glaucovirens (Murb.) Sagorski [≡ *B. sylvaticum* subsp. *glaucovirens* Murb.].

A **Ca(P):** Canary Islands: La Palma, LP 138 near Los Cancajos, around base of palm trunk, 9.8.2007, *Otto 13232* (herb. Otto). – A casual introduction from the C and E Mediterranean.

R. Otto & H. Scholz

Cenchrus incertus M. A. Curtis

A **Bu:** Bulgaria: Russe, East harbour/Danube, 24.7.2003, *Jehlík* (B, PRA). – Originating from the Americas, this is an established alien in many European countries; casual in Bulgaria.
V. Jehlík & H. Scholz

Digitaria radicosa (C. Presl) Miq.

A **Ca(P):** Canary Islands: La Palma, La Cuesta, Maroparque (Vogelpark), 2.9.2009, *Otto 15545* (herb. Otto). – Probably introduced as an accidental impurity of bird-seed. Originating from tropical Asia, introduced into Africa, casual on La Palma. It is related to *Digitaria ciliaris* (Retz.) Koeler (see Clayton & Renvoize 1982). R. Otto & H. Scholz

Elymus heterophyllus (Melderis) H. Scholz, **comb. nov.** ≡ *Agropyron panormitanum* var. *heterophyllum* Melderis in Ark. Bot., ser. 2, 5: 69. 1960 ≡ *Elymus panormitanus* var. *heterophyllus* (Melderis) B. Salomon in Nordic J. Bot. 14: 19. 1994 ≡ *Roegneria heterophylla* (Melderis) C. Yen & al. in Novon 18: 406. 2008.

Eragrostis barrelieri subsp. ***pygmaea*** (Daveau) Portal & H. Scholz

P **Ca(F):** Canary Islands: Fuerteventura, Morro de Jable, 12.4.1970, *Otto 5558* (herb. Otto). – Hitherto only known from the SW Mediterranean; an alien, perhaps established, on Fuerteventura.
R. Otto & H. Scholz

Eragrostis diffusa Buckl. [*E. pectinacea* auct. nonnulli, non (Michx.) Nees]

A **Cs:** Czech Republic: N Moravia, Olomouc, railway station Olomouc-Nová Ulice, c. 220 m, 19.7.1991, *Jehlík & al.* (B, PRA). – A casual introduction from North America. V. Jehlík & H. Scholz

Eragrostis minor subsp. ***angusta*** H. Scholz & Raus

A **Ge:** Germany: Hamburg, harbour, Silo P. Kruse, 25.9. 1980, *Jehlík* (PRA). – A casual introduction from the Mediterranean area. V. Jehlík & H. Scholz

Koeleria macrantha subsp. ***mongolica*** (Domin) H. Scholz, **comb. nov.** ≡ *Koeleria tokiensis* subsp. *mongolica* Domin in Biblioth. Bot. 65: 130. 1907 ≡ *Koeleria cristata* subsp. *mongolica* (Domin) Tzvelev in Novosti Sist. Vysš. Rast. 7: 71. 1971.

Megathyrsus maximus (Jacq.) B. K. Simon & S. W. L. Jacobs

P **Ca(P):** Canary Islands: La Palma, San Andres, wet rocks at barranco estuary, 3.9.2009, *Otto 15552* (herb. Otto). – A doubtfully established alien, also known from Gran Canaria, Gomera and Tenerife.
R. Otto & H. Scholz

Neoschischkinia reuteri subsp. ***botelhoi*** (Rocha Afonso & Franco) H. Scholz, **comb. nov.** ≡ *Agrostis reuteri* subsp. *botelhoi* Rocha Afonso & Franco in Silva Lusit. 5: 141. 1997.

Panicum gattingeri Nash

A **Cs:** Czech Republic: N Moravia, Děčín, Nové Loubí, emporium on Elbe river, on rails, 121 m, 9.9.1995, *Jehlík* (PRA). – A North American species, established elsewhere in Europe (Austria, Slovenia, Italy, and Spain) but only casual in the Czech Republic. V. Jehlík & H. Scholz

Pennisetum centrasiaticum Tzvelev [*P. flaccidum* auct., non Griseb.]

P **Ge:** Germany: Hessen, Seeheim-Jugenheim (6217/24), S of Jugenheim, frequent at wire-mesh fences on the upper edge of high water reservoir and shrubby fallow land, 7.2009, *Hillesheim* (B). – Originally sown for soil protection, now running wild. Introduced by commercial seeds from China or Japan. Line drawings of this rhizomatous perennial (habit, spikelet cluster, spikelet) are published in Cui (1996: 358). This is its first record for the Euro-Mediterranean area.
U. Hillesheim & H. Scholz

Secale strictum subsp. ***chaldicum*** (Fed.) H. Scholz, **comb. nov.** ≡ *Secale chaldicum* Fed. in Zametki Sist. Geogr. Rast. 8: 5. 1939 ≡ *Secale montanum* subsp. *chaldicum* (Fed.) Tzvelev in Novosti Sist. Vysš. Rast. 10: 46. 1973.

Triticum aestivum L.

A **Ca(P):** Canary Islands: La Palma, old airport above San Pedro, 31.8.2006, *Otto 10437* (Herb. Otto); San Pedro, San Isidro, flower bed with palms, 2.9.2009, *Otto 15503* (herb. Otto). – A casual alien, perhaps introduced with bird seeds.
R. Otto & H. Scholz

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