The Euro Med treatment of Astereae (Compositae) — generic concepts and required new names

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The Euro+Med treatment of *Astereae (Compositae)* – generic concepts and required new names

Abstract

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A synonymic survey of *Astereae* genera accepted for the purpose of the Euro+Med Project is presented. As a consequence of shifts in generic circumscription, or reassessment of accepted specific and subspecific taxa, combinations that are required in the genera *Erigeron, Eurybia, Galatella, Symphyotrichum* and *Tripolium,* but do not so far exist, are validated. In one case *(Erigeron alpinus* subsp. *intermedius)* the validity of a previous combination, even though it was rather irregularly proposed, is confirmed.

Introduction

A concise characterisation of the Euro+Med PlantBase Project, its main purposes and planned "products", and of the rationale and prospects of the present Notulae series, can be found in the first instalment of the Notulae, elsewhere in this issue (Willdenowia 33: 37. 2003). Further information on the setup and structures of Euro+Med is displayed on the Internet (http://www.euromed.org.uk).

When I boldly took charge of editing the whole *Compositae* family for Euro+Med, I sought the advice of competent specialists of the various tribes, principally but not exclusively on questions of generic delimitation. For the *Astereae,* I obtained it from Dr Guy Nesom of the Botanical Research Institute of Texas in Fort Worth. Even though the ultimate responsibility for the decisions that had to be taken rests with myself, I owe a debt of sincere gratitude to Dr Nesom for the expert advice he quickly and generously provided.

A generic survey of Euro+Med *Astereae*

The accepted Euro+Med genera of *Astereae,* with their relevant synonyms, are listed in Table 1. No complete synonymy is given, but generic names that were adopted in recent floristic literature for the area are all included.

Since 1976, when vol. 5 of Flora Europaea was published, *Astereae* systematics have progressed considerably but to uneven degrees. As a result of new in-depth studies of phenotype features and, more recently, DNA sequences, combined with reasonably strict adherence to the tenets of phylogenetic systematics (see e.g. Nesom in Phytologia 77: 141-423. 1994; Xiang & Semple in Hind & Beentje, Compos. Syst.: 393-423. 1996), the genus *Aster* is now much more narrowly and more naturally defined than in Flora Europaea. The same cannot be said for the *Erigeron-Conyza* assemblage, still poorly understood: neither *Conyza* nor *Erigeron* as previously defined are monophyletic, nor is it possible yet to dismember them into more satisfactory units, so that the best possible way ahead is to lump them in a widely delimited genus *Erigeron*. This disparity of treatment, with an explosion of *Aster* satellites and concomitant implosion of *Erigeron,* is far from ideal but is probably the best possible solution at present.

The following among the genera now accepted were treated under *Aster* in Flora Europaea: *Bellidiastrum,* which according to Fiz & al. (Molec. Phylog. Evol. 25: 157-171. 2002) is close to *Bellis* and *Bellium* not to *Aster* s.l.; *Eurybia, Galatella* (here fairly widely defined to include *Crinitaria* = *Linosyris*), *Symphyotrichum* (most of the North American asters naturalised in Europe, but including Old World *Brachyactis*) and *Tripolium*. The genera *Kalimeris* (Ito & al. in J. Pl. Res. 108: 93-96. 1995) and *Kemulariella* also belong to the *Aster* complex but do not fall under Flora Europaea's geographical coverage.

Apart from the merging of *Conyza* with *Erigeron,* already mentioned, a further change worth mentioning is the separation of *Euthamia* (treated as subgenus in Flora Europaea) from *Solidago*.

Erigeron

Erigeron acris subsp. ***serotinus*** (Weihe) Greuter, **comb. nova** ≡ *Erigeron serotinus* Weihe in Flora 13: 258. 1830.

Erigeron alpinus subsp. ***intermedius*** (Rchb.) Pawł. in Acta Bot. Croat. 28: 285. 1969 ≡ *Erigeron intermedius* Rchb., Fl. Germ. Excurs.: 240. 1831.

Note: Pawłowski's combination is valid under Art. 33.6(d), in spite of erroneous basionym citation and misguided "lectotypification": there is a Latin description and a type is designated. *Erigeron alpinus* subsp. *intermedius* cannot be accepted as the name of a new taxon: as such it would be an illegitimate later homonym of *Erigeron alpinus* var. *intermedius* (Rchb.) Rapin (Guide Bot. Canton Vaud, ed. 2: 300. 1862).

Erigeron primulifolius (Lam.) Greuter, **comb. nova** ≡ *Inula primulifolia* Lam., Encycl. 3: 261. 1789 ≡ *Conyza primulifolia* (Lam.) Cuatrec. & Lourteig in Phytologia 58: 515. 1985.

Table 1. The Euro+Med genera of *Astereae.* Accepted names appear in bold-face type, their synonyms in italics. Bracketed names are of xenophytic (non-native) genera.

Aster	***Eurybia***	***Psiadia***
[*Baccharis*]	**[*Euthamia*]**	***Psychrogeton***
Bellidiastrum	***Felicia***	= *Novopokrovskia*
Bellis	***Galatella***	***Solidago***
Bellium	= *Crinitaria*	***Symphyotrichum***
[*Callistephus*]	= *Linosyris*	= *Brachyactis*
Ceruana	***Grangea***	= [*Conyzanthus*]
[*Dichrocephala*]	**[*Grindelia*]**	***Tripolium***
Erigeron	**[*Kalimeris*]**	
= *Conyza*	= [*Heteropappus*]	
= *Phalacroloma*	***Kemulariella***	
= *Stenactis*	***Lachnophyllum***	
= *Trimorpha*	***Nolletia***	

Eurybia

Eurybia sibirica subsp. ***subintegerrima*** (Trautv.) Greuter, **comb. nova** ≡ *Aster sibiricus* var. *subintegerrimus* Trautv. in Middendorff, Reise Sibir. 1(2,1-2): 161. 1847 ≡ *Aster sibiricus* subsp. *subintegerrimus* (Trautv.) Á. Löve & D. Löve in Bot. Not. 128: 521. 1975.

Galatella

Galatella linosyris subsp. ***armoricana*** (Rouy) Greuter, **comb. nova** ≡ *Aster linosyris* prol. ("forme") *armoricanus* Rouy, Fl. France 8: 151. 1903 ≡ *Aster linosyris* subsp. *armoricanus* (Rouy) Kerguélen in Lejeunia, ser. 2, 120: 54. 1987.

Galatella sedifolia (L.) Greuter, **comb. nova** ≡ *Aster sedifolius* L., Sp. Pl.: 874. 1753.

Galatella sedifolia subsp. ***dracunculoides*** (Lam.) Greuter, **comb. nova** ≡ *Aster dracunculoides* Lam., Encycl. 1: 303. 1783 ≡ *Galatella dracunculoides* (Lam.) Nees, Gen. Sp. Aster.: 164. 1832 ≡ *Aster sedifolius* subsp. *dracunculoides* (Lam.) Merxm. in Bot. J. Linn. Soc. 68: 279. 1974.

Galatella sedifolia subsp. ***illyrica*** (Murb.) Greuter, **comb. nova** ≡ *Galatella rigida* subsp. *illyrica* Murb. in Acta Univ. Lund. 27: 104. 1891 ≡ *Aster sedifolius* subsp. *illyricus* (Murb.) Merxm. in Bot. J. Linn. Soc. 68: 280. 1974.

Galatella sedifolia subsp. ***rigida*** (Cass.) Greuter, **comb. nova** ≡ *Galatea rigida* Cass. in Cuvier, Dict. Sci. Nat. 18: 58. 1821.

Symphyotrichum

Symphyotrichum parviflorum (Nees) Greuter, **comb. nova** ≡ *Aster parviflorus* Nees, Syn. Aster. Herb.: 29. 1818.

Tripolium

Tripolium pannonicum subsp. ***tripolium*** (L.) Greuter, **comb. nova** ≡ *Aster tripolium* L., Sp. Pl.: 872. 1753 ≡ *Aster tripolium* L. subsp. *tripolium* [per Nyman, Consp. Fl. Eur.: 387. 1879] ≡ *Tripolium pannonicum* subsp. *maritimum* Holub in Folia Geobot. Phytotax. 8: 177. 1973, nom. illeg. – This taxon is often referred to as *Tripolium vulgare* Nees (Gen. Sp. Aster.: 153. 1832), which, however, is an illegitimate replacement name for *Aster pannonicus* Jacq.

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