A nomenclatural treatment for *Logfia* Cass. and *Filago* L. (*Asteraceae*) as newly circumscribed: Typification of several names

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Abstract A complete nomenclatural treatment of the genera *Filago* L. and *Logfia* Cass. is provided, as well as a list of the species included in each genus and subgenus, as they have been newly circumscribed. Nomenclatural types for eleven validly published species names are designated, which correspond to (1) the types of names of widely used and long-established genera or subgenera, (2) the names of species that have been chosen as types of the names of newly described or newly delimited subgenera, or (3) recently proposed new combinations at the specific level. In total, one subgeneric name is typified and eleven lectotypes, five epitypes and one neotype are chosen. Among those, a previous attempted typification of *F. pygmaea* L. is shown to be inadmissible and a new lectotype is chosen and an epitype is selected to support interpretation of a previously designated lectotype. The need to conserve the name *F. vulgaris* to preserve current usage is documented.

Keywords *Compositae*; *Cymbolaena*; *Evacidium*; *Evax*; *Filago*; *Gnaphalieae*; *Logfia*; nomenclature; taxonomy; typification

■ INTRODUCTION

Filago L. s.l. (sensu Linnaeus, 1753; and Wagenitz, 1969; i.e., mainly the Mediterranean representatives of the "*Filago* group" sensu Anderberg, 1991, except for *Bombycilaena* (DC.) Smoljan. and *Micropus* L.) is a genus of annual *Asteraceae* very widely distributed in the Northern Hemisphere. A molecular phylogenetic survey of the "*Filago* group" sensu Anderberg (1991) associated with the present nomenclatural account (Galbany-Casals & al., 2010) showed that homoplasy is widespread in the group, due to early reticulation and parallel or convergent evolution of many morphological characters. For these reasons, the generic circumscription and species delimitation within *Filago* and allied genera, as well as the traditional infrageneric classification of *Filago* have been difficult tasks and a matter of frequent discussion (i.e., Linnaeus, 1753; Smoljaninova 1959; Wagenitz, 1969; Holub, 1976; or Anderberg, 1991; summarised in Galbany-Casals & al., 2010).

Based on the first phylogenetic analysis of the "*Filago* group" derived from DNA sequence data, a generic and infrageneric rearrangement has recently been proposed (Galbany-Casals & al., 2010). The genus *Logfia* is considered independent from *Filago*, *Filago* is divided into four subgenera and includes two traditionally monotypic genera—*Cymbolaena* Smoljan. and *Evacidium* Pomel—that had never been included in *Filago* before.

Here we provide a complete nomenclatural account for the genera *Filago* and *Logfia*, as well as for the subgenera within *Filago* currently accepted by us. In connection with it, several typifications are provided in order to fix the usage of names and their precise application, and to help defining the identity of taxa. This contribution focuses on the typification of the names of all genera and subgenera widely used for a long time, of species names that have been chosen as types of the newly described or newly circumscribed subgenera in Galbany-Casals & al. (2010), and on the typification of the new combinations established there.

■ MATERIALS AND METHODS

In the following classification we list the accepted genera and subgenera within *Filago*, as well as the synonyms most commonly used historically and their types. Next, we list all the accepted species included in each genus and subgenus. The species of difficult ascription are listed as *incertae sedis*. We use "(?)" after the names of species not included in the molecular analyses by Galbany-Casals & al. (2010), but which based on our taxonomic knowledge of the "*Filago* group" are provisionally ascribed to a genus or subgenus. The names in bold are those in current use at the rank accepted by us.

Finally, within each genus and subgenus, the relevant species names for the purpose of typification are listed in alphabetical order. We cite or provide types for the accepted name of each taxon, as well as for the corresponding most widely used synonyms. In each case, we mention the holotype, or the selected lectotype, epitype or neotype. We have selected a lectotype according to Art. 9.2 of the latest edition of the *ICBN* (McNeill & al., 2006), an epitype (Art. 9.7 *ICBN*) or a neotype (Art. 9.6 *ICBN*), whenever necessary. We mention isotypes and syntypes only when they have been directly checked by us.

We have examined all the relevant protologues and other taxonomic literature. Our decisions are based on our taxonomic knowledge of the "*Filago* group", as well as on a careful study of herbarium materials deposited in 31 herbaria (ABH, ALME, B, BC, BCN, BIO, BM, C, COI, G, GDA, GOET, HGI, JACA,

K, LD, LE, LEB, LINN, MA, MAF, MGC, MJG, MPU, P, PR, SALA, SBT, SEV, UPS, Z), although we have only used materials from nine of them for typification purposes: COI, G-BOISS, G-DC, K, LE, LINN, MA, MPU-DELILE, MPU-MAIRE, P, UPS-BURSER. In all cases, we took particular care in designating types that are in accordance with the protologues and that support the current usage of the names.

Photographs have been taken of all relevant material traced and are available from the corresponding author upon request.

Finally, notes on taxonomic and/or nomenclatural aspects are added wherever it is considered appropriate.

■ TAXONOMIC TREATMENT AND NEW TYPIFICATIONS

Filago L., Sp. Pl.: 1199. 1753, nom. cons. – Type: *Filago pyramidata* L., typ. cons.

Filago L. subg. ***Filago*** ≡ *Filago* L. sect. *Filago.*

= *Evax* Gaertn., Fruct. Sem. Pl. 2: 393. 1791 ≡ *Filago* subg. *Evax* (Gaertn.) Wagenitz in Willdenowia 5: 423. 1969 – Type: *Evax umbellata* Gaertn. (= *Filago pygmaea* L.).

= *Gifola* Cass. in Bull. Sci. Soc. Philom. Paris 1819: 142. 1819 ≡ *Filago* sect. *Gifola* (Cass.) DC., Prodr. 6: 247. 1838 ≡ *Filago* subg. *Gifola* (Cass.) Gren., Fl. Jurass. 2: 429. 1869 ≡ *Impia* Bluff & Fingerh., Comp. Fl. German. 2: 342. 1825, nom. illeg. (Art. 52.1 *ICBN*) – Type: *Gifola germanica* (L.) Dumort. (≡ *Gnaphalium germanicum* L. ≡ *Filago germanica* (L.) Huds.) (= *Filago vulgaris* Lam.).

= *Filago* sect. *Gifolaria* Coss. & Kralik in Bull. Soc. Bot. France 4: 280. 1857 ≡ *Filago* subg. *Gifolaria* (Coss. & Kralik) Pomel, Nouv. Mat. Fl. Atl. 1: 46. 1874 ≡ *Gifolaria* (Coss. & Kralik) Pomel in Bull. Soc. Bot. France 35: 335. 1888 – Type: *Filago mareotica* Delile.

= *Evacopsis* Pomel, Nouv. Mat. Fl. Atl. 1: 41. 1874 – Type (designated by Wagenitz, 1966: 337): *Evacopsis polycephala* Pomel (≡ *Filago polycephala* (Pomel) Wagenitz) (= *Filago congesta* Guss. ex DC.).

= *Evax* sect. *Evacella* Smoljan. in Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 18: 269. 1957 – Type: *Evax arenaria* Smoljan. (≡ *Filago arenaria* (Smoljan.) Chrtek & Holub).

= *Evax* sect. *Filaginoides* Smoljan. in Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 18: 273. 1957 – Type: *Evax filaginoides* Kar. & Kiril. (≡ *Filago filaginoides* (Kar. & Kiril.) Wagenitz).

Filago subg. ***Filago*** includes the following species: ***F. abyssinica*** Sch. Bip. ex A. Rich.(?), ***F. aegaea*** Wagenitz, ***F. anatolica*** (Boiss. & Heldr.) Chrtek & Holub, ***F. arenaria*****, *F. argentea*** (Pomel) Chrtek & Holub, ***F. asterisciflora*** (Lam.) Sweet, ***F. carpetana*** (Lange) Chrtek & Holub, ***F. congesta*****, *F. contracta*** (Boiss.) Chrtek & Holub(?), ***F. cretensis*** Wagenitz(?), ***F. desertorum*** Pomel, ***F. duriaei*** Coss. ex Lange, ***F. eriocephala*** Guss., ***F. filaginoides*****, *F. fuscescens*** Pomel, ***F. gaditana*** (Pau) Andrés-Sánchez & Galbany, ***F. hurdwarica*** (DC.) Wagenitz(?), ***F. inexpectata*** Wagenitz, ***F. lusitanica*** (Samp.) P. Silva, ***F. lutescens*** Jordan, ***F. mareotica*****, *F. micropodioides*** Lange, ***F. petro-ianii*** J. Rita & Dittrich(?), ***F. prolifera*** Pomel(?), ***F. pygmaea*****, *F. pyramidata*****, *F. ramosissima*** Lange, ***F. tyrrhenica*** Chrtek & Holub.(?), ***F. vulgaris*****.**

Filago arenaria (Smoljan.) Chrtek & Holub in Preslia 53: 3. 1963 ≡ *Evax arenaria* Smoljan. in Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 18: 269. 1957 – Lectotype (designated here): Asia Media. In arenis austro-occidentalibus Kyzyl-Kum, prope pagum Adymbai, 8-VI-1932, *C. Nikitin & N. Michailova 182* (LE!).

Note: We have found two sheets of *F. arenaria* bearing the same text (*ind. loc.*) on their labels in LE, of which we choose as lectotype the sheet containing eight individuals that bears a revision label by Smoljaninova. The other sheet (isotype) shows only two individuals and was revised by Smoljaninova and Wagenitz.

Filago congesta Guss. ex DC., Prodr. 6: 248. 1838 – Holotype: Sicilia, 1831, *Gussone* (G-DC G00203355 photo!).

= *Filago polycephala* (Pomel) Wagenitz in Ber. Deutsch. Bot. Ges. 79(7): 337. 1966 ≡ *Evacopsis polycephala* Pomel, Nouv. Mat. Fl. Atl. 1: 43. 1874 – Lectotype (designated by Wagenitz, 1966: 338): O. Djebel Amour à Sidi-bou-Zid, 1860, *Pomel* (MPU-MAIRE!).

Filago filaginoides (Kar. & Kiril.) Wagenitz in Willdenowia 5: 417. 1969 ≡ *Evax filaginoides* Kar. & Kiril. in Bull. Soc. Imp. Naturalistes Moscou 15: 379. 1842 – Lectotype (designated by Wagenitz, 1969: 417): In arenosis Songoriae prope Kusu-kerpetsch ad fl. Ajagis, 1841, *Karelin & Kiriloff 1616* (LE!).

Filago gaditana (Pau) Andrés-Sánchez & Galbany in Taxon 59: 1689. 2010 ≡ *Evax pygmaea* var. *gaditana* Pau in Mem. Real Soc. Esp. Hist. Nat. 21: 340. 1924 – Lectotype (designated here): Djebel Kebir, April 1921, *C. Pau* (MA123865!); syntype: Casas Viejas (Cádiz), IV-1914, *F. Beltrán*, det. C. Pau (MA123956!).

= *Evax asterisciflora* var. *ramosissima* Mariz in Bol. Soc. Brot. 9: 183. 1891 ≡ *Filago pygmaea* subsp. *ramosissima* (Mariz) R. Fern. & Nogueira in Bol. Soc. Brot., ser. 2, 45: 323. 1971 ≡ *Evax pygmaea* subsp. *ramosissima* (Mariz) R. Fern. & Nogueira in Bol. Soc. Brot., ser. 2, 52: 67. 1978 – Lectotype (designated by Fernandes & Nogueira, 1971: 325): Coimbra, Baleia, May 1876, *M. Ferreira* (COI!).

Filago mareotica Delile, Descr. Égypte, Hist. Nat. 2: 274. 1813–1814 ≡ *Micropus mareoticus* (Delile) Spreng., Syst. Veg. 3: 499. 1826 ≡ *Evax mareotica* (Delile) DC., Prodr. 5: 459. 1836 ≡ *Evacopsis mareotica* (Delile) Pomel in Bull. Soc. Bot. France 35: 334. 1888 ≡ *Gifolaria mareotica* (Delile) Chrtek & Holub in Preslia 35: 10. 1963 – Lectotype (designated here): illustration in Delile, Descr. Égypte, Hist. Nat. 2: tab. 47, fig. 2. 1813–1814; epitype (designated here): *F. mareotica* (MPU-DELILE MPU007025!).

Note: Delile (1813–1814: 274) gives the following indication in the protologue: “Cette plante croît auprès des anciennes

carrières d'Alexandrie et du lac Mareotis." We have found a specimen at Delile's herbarium in MPU that bears the annotation "Filago mareotica" in Delile's handwritting as compared with Burdet (1979), but no further indication. It is therefore not completely certain that this is original material of *F. mareotica*. There is also a plate (Delile, l.c.) cited in the protologue, but the plant with solitary capitula drawn there is not depicted with enough detail and is ambiguous in that the characters that could help to distinguish *F. mareotica* from *Logfia clementei* (L.) Holub (i.e., morphology of the external receptacular paleae), from *F. ramosissima* (i.e., inner florets hermaphrodite or functionally male and pappus present or absent) and from *F. fuscescens* (i.e., number of receptacular paleae and arista length) cannot be discerned. We designate Delile's plate as the lectotype for this name with the support of the sheet from Delile's collection as an epitype.

Filago pygmaea L., Sp. Pl.: 927. 1753 ≡ *Micropus pygmaeus* (L.) Desf., Fl. Atlant. 2: 307. 1799 ≡ *Evax pygmaea* (L.) Brot., Fl. Lusit.: 363. 1804 – Lectotype (designated here): *Gnaphalium roseum Bauh. Figura e(st) in Prodromo.* Massiliae sponte (UPS-BURSER 15-1 12 photo!); epitype (designated here): Filago pygmea [on verso:] Filago [illegible] ex agro niciensi, *Allioni* (LINN 1041.1!); other original material: illustration in Barrelier, Pl. Galliam: t. 127. 1714; illustration in C. Bauhin, Prodr.: 122. 1620; illustration in Vaill. in Mém. Acad. Roy. Sci. (Paris) 1719: t. 20, f. 9. 1719.

≡ *Filago acaulis* L., Syst. Nat., ed. 12, 2: 580. 1767 – Lectotype (designated here): UPS-BURSER 15-1 12 photo! detailed under *F. pygmaea* above; epitype (designated here): LINN 1041.1! detailed under *F. pygmaea* above.

= *Evax umbellata* Gaertn., Fruct. Sem. Pl. 2: 393. 1791 – Lectotype (designated here): illustration in Gaertn., Fruct. Sem. Pl. 2: *Evax umbellata* t. CLXV. 1791; epitype (designated here): LINN 1041.1! detailed under *F. pygmaea* above; original material: illustration in J. Bauhin, Hist. Pl. 3: 162, *Gnaphalium umbellatum minimum* CAP. LVI. 1651.

Note: Alavi (1983) selected the sheet LINN 1041.1 as the type for the name *F. pygmaea* (see Jarvis, 2007). This material must have been sent to Linnaeus by C. Allioni after 1757, as these botanists did not exchange correspondence before that year (Allioni, 1757). Therefore the material could not have been studied by Linnaeus before 1753 and cannot be considered original material, thus representing a neotype. Under Art. 9.17 (a) of the *ICBN*, the choice of a neotype can be superseded in case any of the original material is rediscovered. None of the three illustrations previously mentioned as original elements can be unambiguously interpreted (i.e., important details helping unequivocal identification of *F. pygmaea*, such as the morphology of the receptacular paleae and of the achene of the external florets, cannot be appreciated in the illustrations) and, therefore, none of them would be a good choice as a lectotype. There is also additional material lodged at Burser's herbarium that is apparently the only extant remaining relevant element for this typification (Jarvis, 2007) and we here select it as a lectotype. But, unfortunately, the three specimens in this sheet are conserved in a very poor condition: they all have lost the capitula and no achene is preserved, so the characters that allow distinguishing *F. pygmaea* from *F. lusitanica* and *F. gaditana*—i.e., presence/absence and morphology of the hyaline trichomes of the achene—cannot be observed. For this reason, we additionally select an epitype from the Linnaean collections at LINN that will allow unambiguous identification and precise taxonomical interpretation of the type. *Filago pygmaea* shows a high level of intraspecific variation in DNA sequences (Galbany-Casals & al., 2010) and it is also a very heterogeneous taxon from a morphological point of view. Therefore, the intraspecific taxonomy of the complex *F. pygmaea* could change on the light of new data. In our opinion, the original Linnaean concept could be best preserved by the selection of this epitype than by the choice of modern material.

Filago acaulis has often been considered illegitimate as it was evidently published by Linnaeus in 1767 (p. 580) as a replacement name for *F. pygmaea*. However, as no type of *F. pygmaea* then existed and as the name, *F. pygmaea*, was not cited, the requirements of Art. 52.2 for inclusion of the type of *F. pygmaea* were not met. To maintain current practice the two names are made homotypic by the lectotypifications above.

Filago pyramidata L., Sp. Pl.: 1199. 1753 ≡ *Gnaphalium pyramidatum* (L.) Lam., Encycl. 2: 760. 1788 ≡ *Gnaphalium germanicum* var. *pyramidatum* (L.) Duby, Bot. Gall. 1: 269. 1828 ≡ *Filago germanica* var. *pyramidata* (L.) Gaudin, Fl. Helv. 5: 253. 1829 ≡ *Gifola pyramidata* (L.) Dumort., Fl. Belg.: 69. 1827 – Neotype (designated here): LINN 1041.5!.

Note: The protologue of *F. pyramidata* by Linnaeus (1753: 1199) reads: "*Habitat in Hispania. Loefling*" and, hypothetically, additional original elements could be found at any of the herbaria that lodge Loefling's collections (LINN, SBT). Nevertheless, we have revised these collections and no original material has been found.

Jarvis (2007; after Wagenitz, 1965) cited a sheet lodged at Burser's Herbarium (UPS_BURSER 15-1 008 photo!) and an illustration in Petiver (1713–1715: 18, t. 18, f. 10) as materials relevant for this typification. Neither of these elements can be chosen as type for *F. pyramidata* because neither is original material of that name, but both are original material of *Gnaphalium germanicum*, described on page 857. Following Greuter (in Greuter & Rechinger, 1967: 136–138), we consider that, despite Linnaeus uniting these two species (in the Addendum following the Index to *Species Plantarum*), he did not cease to accept either (Art. 34.1) and they remain heterotypic synonyms. In this situation, we here select a neotype for *F. pyramidata*.

Filago vulgaris Lam., Fl. Franç. 2: 61. 1779, nom. cons. prop. ≡ *Gifola vulgaris* (Lam.) Cass. in Cuvier, Dict. Sci. Nat. 18: 531. 1820 – Type (proposed for conservation by Andrés-Sánchez & al., 2011b): 1 *germanica* (LINN 1041.4!), typ. cons. prop.

= *Gnaphalium germanicum* L., Sp. Pl.: 857. 1753, nom. rej. prop. ≡ *Filago germanica* (L.) Huds., Fl. Angl.: 328. 1762 ≡ *F. rotundata* Moench, Methodus: 577. 1794, nom. illeg. (Art. 52.1 *ICBN*) – Lectotype (designated here): Ruhrkraut. In Lusatia, Misnia & c., Herb. Burser XV: 8 (UPS_BURSER 15-1 008 photo!).

Note: *Filago vulgaris* is an illegitimate name according to Art. 52.1, but it has been proposed to conserve it against *G. germanicum* (see Andrés-Sánchez & al., 2011b).

Not recognizing that *F. vulgaris* is an illegitimate name, Wagenitz (1965) proposed to select the illustration by Fuchs (1542) as lectotype. This shows a plant not drawn with as much precision as one might desire. The identity of this illustration is ambiguous because the number of capitula per glomerule and the morphology of the receptacular paleae (aristate or not) cannot be observed. These are the most important features distinguishing *F. vulgaris* from *F. eriocephala* Guss., a name in current use for a distinct species. Therefore, we do not consider this to be suitable as the conserved type. As *Filago vulgaris* is morphologically very variable we consider that the original Linnaean concept would be best preserved by the choice of the Linnaean specimen cited above rather than by the selection of modern material.

Filago subg. ***Oglifa*** (Cass.) Gren., Fl. Jurass. 2: 430. 1869 (excl. *F. minima* Fries) ≡ *Gnaphalium* subg. *Oglifa* Cass. in Bull. Sci. Soc. Philom. Paris 1819: 143. 1819 ≡ *Oglifa* (Cass.) Cass. in F. Cuvier, Dict. Sci. Nat. 23: 564. 1822 ≡ *Achariterium* Bluff & Fingerh., Comp. Fl. German. I, 2: 345. 1825, nom. illeg. (Art. 52.1 *ICBN*) – Type: *Filago arvensis* L.

= *Micropus* sect. *Diplocymbium* Benth., Gen. Pl. 2: 298. 1873 ≡ *Stylocline* sect. *Diplocymbium* (Benth.) A. Gray in Proc. Amer. Acad. Arts. 8: 652. 1873 – Type: *Stylocline griffithii* A. Gray (= *Filago griffithii* (A. Gray) Andrés-Sánchez & Galbany).

= *Cymbolaena* Smoljan. in Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 17: 452. 1955 ≡ *Micropus* sect. *Cymbolaena* (Smoljan.) Wagenitz in Hegi & al., Ill. Fl. Mitt.-Eur., ed. 2, 6(3): 108. 1965 – Type: *Cymbolaena longifolia* (Boiss. & Reut.) Smoljan. (≡ *Micropus longifolius* Boiss. & Reut. = *F. griffithii*).

Filago subg. ***Oglifa*** includes the following species: ***F. arvensis*****,** ***F. griffithii*****,** and ***F. paradoxa*** Wagenitz.

Filago arvensis L., Sp. Pl.: Addenda post indicem. 1753, nom. altern. ≡ *Gnaphalium arvense* L., Sp. Pl.: 856. 1753, nom. altern. ≡ *Oglifa arvensis* (L.) Cass. in F. Cuvier, Dict. Sci. Nat., ed. 2, 35: 448. 1825 ≡ *Logfia arvensis* (L.) Holub in Notes Roy. Bot. Gard. Edinburgh 33: 432. 1975 – Type (proposed for conservation by Andrés-Sánchez & al., 2011a): "*Filago altera Dod. Pempt. by Inst. R. h.; Filago vulgaris, floribus per caulem sparsis Inst. R. h. Hist. Plant. Paris; Gnaphalium majus, angusto oblongo folio C.B. Pin. 263*", *Vaillant* (P!), typ. cons. prop.

= *Filago montana* L., Sp. Pl.: Addenda post indicem. 1753, nom. altern. ≡ *Gnaphalium montanum* L., Sp. Pl.: 857. 1753, nom. altern. – Lectotype (designated here): 33 *montana* (LINN 1041.8!).

Filago griffithii (A. Gray) Andrés-Sánchez & Galbany in Taxon 59: 1689. 2010 ≡ *Stylocline griffithii* A. Gray in Proc. Amer. Acad. Arts 8: 652. 1873 ≡ *Cymbolaena griffithii* (A. Gray) Wagenitz in Oesterr. Bot. Z. 119: 402. 1972 – Lectotype (designated by Wagenitz, 1972: 402): Affghanistan, *Griffith*, Herb. East. India Co. 3221 (GH); isolectotype: Affghanistan, *Griffith*, Herb. East. India Co. 3221 (K!).

= *Micropus longifolius* Boiss. & Reut., Fl. Orient. 3: 242. 1875 ≡ *Cymbolaena longifolia* (Boiss. & Reut.) Smoljan. in Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 17: 452. 1955 – Lectotype (designated here): Phrygiae, Boulgas-Keui, 950 m, champs en friche, 14 juin 1857, 1273 B. Balansa, Pl. d'Orient (G-BOISS G00150137 photo!); syntypes: G00150126 photo!; G00150128 photo!; G00150129 photo!; G00150130 photo!; G00150131 photo!; G00150132 photo!; G00150133 photo!; G00150134 photo!; G00150136 photo!; G00150528 photo!; G00192133 photo!; G00192134 photo!; G00192135 photo!; G00192136 photo!; G00192137 photo!; K!.

Filago subg. ***Pseudevax*** (DC.) Andrés-Sánchez & Galbany in Taxon 59: 1689. 2010 ≡ *Evax* sect. *Pseudevax* DC., Prodr. 5: 459. 1836 – Type (designated here): *Evax discolor* [≡ *Filago discolor* (DC.) Andrés-Sánchez & Galbany].

= *Evacidium* Pomel, Nouv. Mat. Fl. Atl. 2: 287. 1875 – Type: *Evacidium atlanticum* Pomel (= *F. discolor*).

Filago subg. ***Pseudevax*** includes the following species: ***F. discolor*** and ***F. hispanica*** (Pau) Chrtek & Holub.

Filago discolor (DC.) Andrés-Sánchez & Galbany in Taxon 59: 1689. 2010 ≡ *Evax discolor* DC., Prodr. 5: 459. 1836 ≡ *Evacopsis discolor* (DC.) Pomel, Nouv. Mat. Fl. Atl. 1: 43. 1874 ≡ *Evacidium discolor* (DC.) Maire in Bull. Soc. Sci. Nat. Maroc 11: 101. 1931 – Lectotype (designated here): Sicilia, 1831, *Gussone* (G-DC G00203496 photo!); syntype: Sicilia, 1834, Gussone (G-DC G00203495 photo!).

= *Evacidium atlanticum* Pomel, Nouv. Mat. Fl. Atl. 2: 288. 1875 – Holotype: "Ras Pharaoun (Aurés)" 18-V-1874, *Pomel* (MPU-MAIRE!).

Filago subg. ***Crocidion*** Andrés-Sánchez & Galbany in Taxon 59: 1689. 2010 – Type: *Filago crocidion* (Pomel) Chrtek & Holub.

– *Filago* subg. *Evax* (Gaertn.) Wagenitz in Willdenowia 5(3): 423. 1969, pro parte, typo exclus. (*F. nevadensis* (Boiss.) Wagenitz & Greuter, *F. crocidion* (Pomel) Chrtek & Holub).

Filago subg. ***Crocidion*** includes the following species: ***F. crocidion*****,** ***F. nevadensis*** and ***F. perpusilla*** (Boiss. & Heldr.) Chrtek & Holub(?).

Filago crocidion (Pomel) Chrtek & Holub in Preslia 35: 3. 1963 ≡ *Evax crocidion* Pomel, Nouv. Mat. Fl. Atlant. 1: 40. 1874 – Lectotype (designated here): Nador (de Tiaret) 24 May 1860, *Pomel* (MPU-MAIRE MPU004854!).

Logfia Cass. in Bull. Sci. Soc. Philom. Paris 1819: 143. Sep 1819 ≡ *Xerotium* Bluff & Fingerh., Comp. Fl. German. I, 2: 343. 1825, nom. illeg. (Art. 52.1 *ICBN*) ≡ *Filago* subg. *Logfia* (Cass.) Gren., Fl. Jurass. 2: 431. 1869 ≡ *Filago* sect. *Logfia* (Cass.) Boiss., Fl. Orient. 3: 248. 1875 – Type: *Logfia gallica* (L.) Coss. & Germ.

Note: Based on the most recent generic re-circumscription based on molecular evidence (Galbany-Casals & al., 2010), we disagree with Morefield's (2004) and Holub's (1975, 1976, 1998) circumscription of *Logfia* to include the genus *Oglifa*. We consider them independent taxa, the latter at subgeneric level within *Filago*. The possible problems with priority of names that this consideration could produce (Morefield, 2004) are solved by Flann & al. (2010).

The genus ***Logfia*** includes the following species: ***L. clementei***, ***L. gallica***, ***L. heterantha*** (Rafin.) Holub and ***L. minima*** (Sm.) Dumort.

Logfia gallica (L.) Coss. & Germ. in Ann. Sci. Nat., ser. 2, 20: 291. 1843 ≡ *Filago gallica* L., Sp. Pl.: Addenda post indicem. 1753, nom. altern. ≡ *Gnaphalium gallicum* L., Sp. Pl.: 857. 1753, nom. altern. ≡ *Oglifa gallica* (L.) Chrtek & Holub in Preslia 35: 10. 1963 – Lectotype (designated by Alavi, 1983: 48): *gallica* 34 (LINN 1041.6!).

Species from *Filago* sensu Wagenitz (1969) under *incertae sedis*:

Filago neglecta (Soyer-Willemet) DC., ***F. palaestina*** (Boiss.) Chrtek & Holub, and ***F. eriosphaera*** (Boiss. & Heldr.) Chrtek & Holub and ***F. wagenitziana*** Bergmeier.

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