
New Taxa and Names in North American *Ancistrocarphus*, *Diaperia*, and *Logfia* (Asteraceae: Gnaphalieae: Filagininae) and Related Taxa

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ABSTRACT. *Ancistrocarphus keilii*, a distinctive, rarely collected, previously undescribed, and recently rediscovered species endemic to Santa Barbara County, California, is formally named. *Diaperia* is resurrected for three North American species usually placed in, but clearly distinct from, *Evax*. The name *Evax verna* is neotypified to be consistent with current usage that includes *Evax multicaulis* (as a new synonym), and the new combinations *Diaperia verna* and *Diaperia verna* var. *drummondii* are provided. *Diaperia prolifera* var. *barnebyi*, a long-collected but previously undescribed variety from southeastern New Mexico, western Texas, and southwestern Oklahoma, is also formally named. Among Cassini's anagrammatic segregates from *Filago*, the priority of *Logfia* over *Oglifa* is at best ambiguous, but is adopted to preserve current usage in the Old World, pending a proposal to conserve. A priorable epithet being available, the new combination *Logfia filaginoides* is made for the species long known as *Filago californica* (newly synonymized), including *Filago californica* var. *tomentosa* (also a new synonym). The correct basionym of *Oglifa* is established as *Gnaphalium* subg. *Oglifa*, contrary to earlier interpretations.

Key words: *Ancistrocarphus*, Asteraceae, Compositae, Cassini, *Diaperia*, *Evax*, Filagininae, *Filago*, Gnaphalieae, *Gnaphalium*, *Logfia*, *Micropsis*, North America, *Oglifa*.

During field and herbarium studies of several thousand specimens and populations of Asteraceae subtribe Filagininae Benth & Hooker f. for a systematic analysis of the subtribe (Morefield, 1992a), for the *Jepson Manual* (Hickman, 1993), and soon for the *Flora of North America* (Flora of North America Editorial Committee, 1993+), several previously undescribed taxa have been named, and the circumscriptions and distributions of certain genera and smaller taxa have been clarified (Morefield, 1992b, 1992c, 1992d). In order to continue this process for the *Flora of North America*

project, several new taxa, names, and circumscriptions are proposed or reported herein.

The capitula of Filagininae, though small, are unusually complex for Asteraceae, particularly in the organization of florets and receptacular bracts (paleae; see diagram in Felger, 2000: 101; Morefield & Felger, 2000) and in the minute but systematically important variation of the paleae. For this reason, certain conventions of terminology have been adopted for the upcoming *Flora of North America* treatments and are used here also for efficiency and comparability. The disciform capitula of Filagininae possess two or more outer series of pistillate florets surrounding relatively few, central, functionally staminate or sometimes bisexual florets. The paleae and other structures are referred to according to the sexual condition of their associated florets as, for example, *pistillate paleae* or *staminate corollas* or *bisexual cypselsae*. All florets, or at least the outermost pistillate florets, are subtended (and often enclosed to various degrees) by a palea. Each palea often is further differentiated into a central and proximal *body* and a scarious, reflexed, marginal and distal *wing*. The outer pistillate paleae have assumed the involucre function in most species, the true involucre and its phyllaries being present outside the paleae, but usually strongly reduced and/or differentiated, and sometimes vestigial.

The leaves that immediately subtend capitula and/or glomerules are often differentiated, and are termed *capitular leaves*. Branches may also immediately subtend capitula or glomerules; if so, capitular leaves collectively subtend such branches and their capitula, and capitula appear to be sessile in forks of pseudo-dichotomies or -polytomies. Sometimes capitular leaves subtend only glomerules and not individual capitula, and individual capitula may be difficult to distinguish within glomerules.

The descriptions of new taxa herein include all differential traits of systematic significance within

Filagininae, so as to be comparable with previously published descriptions (Morefield, 1992b, 1992c).

ANCISTROCARPHUS EXPANDS

Two peculiar specimens of diminutive, stemless annuals collected in Santa Barbara County, California, by Ralph Hoffmann in the spring of 1929 and labeled as *Hesperevax* (A. Gray) A. Gray were found among the collections of the Santa Barbara Botanical Garden in the late 1980s. Their generic affinities were not immediately evident, and there was considerable doubt that the species still survived amidst the relatively dense human population of its locality after six decades. Further phylogenetic study based on morphology placed the unnamed taxon as the sister species of *Ancistrocarphus filagineus* A. Gray, heretofore the sole species in the genus, with a high degree of confidence (Morefield, 1992a). A recent collection by David J. Keil greatly clarified the distribution and habitat of the species and demonstrated that it still survives in the wild.

Ancistrocarphus keilii Morefield, sp. nov. TYPE: U.S.A. California: Santa Barbara Co., Vandenberg Air Force Base, North Base, Pine Canyon Road betw. Utah Ave. & Lompoc Gate, Burton Mesa Chaparral & coastal live oak woodland, local in minute herb carpet beneath shrubs, 4 Mar. 1995, D. Keil 24561 & L. D. Oyler (holotype, OBI 054629; isotype, MO). Figure 1.

Ancistrocarpho filagineo similis, sed caulibus nullis; foliis omnino basalibus valde petiolatis, basibus foliorum valde expansis circum capitula arete involucri; paleis staminatis paleis pistillatis plerumque brevioribus nec longioribus, 1.8–2.8 (ad invicem 2.7–4.1) mm longis late spatulatis non lanceolatis; apicibus palearum staminatarum obtusis rotundatisve apiculatis non acuminatis et apiculis scariosis non spiniformibus; cypselis 1–1.4 × 0.5–0.6 (ad invicem 1.4–2 × 0.6–0.9) mm non atrofasciatis; phyllariis vestigialibus; receptaculis obpanduriformibus non fungiformibus; et apicibus palearum pistillatarum alis scariosis indistinctis lanceolatis nec distinctis nec ovatis; *Hesperevaci acauli* var. *acauli* similis, sed receptaculis inter paleas glabris; paleis pistillatis trinervatis saccatis tarde deciduis nec apertis nec permanentibus, unaquaeque cypselam perfecte includenti; basibus palearum staminatarum ad maturitates patulescentibus; et apicibus palearum staminatarum ad maturitates valde incurvatis apiculatis non rotundatis et apiculis scariosis non herbaceis.

Diminutive acaulous annuals 0.5–1(–2) cm high from taproots (sometimes densely clustered, appearing as 1 fibrous-rooted plant), plants grayish green, arachnoid-sericeous throughout. *Leaves* all basal, rosulate, simple, strongly petiolate, up to 10(–18) × 1(–2) mm, longest 3–6× capitula lengths,

abruptly differentiated from paleae, or 1 or 2 ± grading into paleae by reduction of blades and expansion of petiole bases, sometimes losing blades altogether and then resembling long-aristate phyllaries; *petioles* mostly 1–3× blade lengths; *petiole bases* strongly expanded, ± parchment-like in texture, yellowish to tan, prominently 3-veined, closely involucriate; *blades* oblanceolate to obovate, ± planar to folded, pliant, entire, uniformly arachnoid-sericeous, primary vein 1, subordinate venation obscure, apices acute to rounded, mucronate. *Capitulescences* 1, unbranched, each consisting of 1 sessile capitulum among leaves, sometimes appearing to form dense leafy glomerules of 2 to 10, but these consisting instead of densely packed 1-headed plants with separate taproots (apparently having germinated in-place from intact capitula of previous year's plants); *capitula* disciform, fully paleate, erect, ± spheric, 2.5–3.5 mm diam.; *involucres* vestigial, functionally simulated by petiole bases and paleae; *receptacles* broadly hourglass-shaped or obpanduriform, 0.9–1.3 mm long, 1–2× as long as wide, glabrous; *paleae* about 10 to 17 in 2 or 3 spirally ranked series, free throughout, veins parallel, not reaching apices, apices shortly glabrous; *pistillate paleae* falling separately (at least upon dissection, tardily so or sometimes not at all in nature), in 1 or 2 series, imbricate, erect to ascending, saccate, 3-veined (central vein thinning, obscure with age, lateral veins remaining prominent), each embracing a floret, ultimately completely enclosing a cypsel, gently incurved, ± ovate, longest 2.3–3.3 mm long, *wings* indistinct, continuous across apices of paleae, incurved (with styles) over staminate florets at anthesis, at maturity ± involute, incurved, shiny, translucent, obscurely striate, lanceolate, entire, glabrous, *bodies* brownish, ± navicular, not gibbous, obcompressed, thinly cartilaginous between veins, abaxial surfaces ± rounded transversely, arachnoid distally near margins or sometimes wholly glabrate, adaxial surfaces arachnoid to thinly lanuginose; *staminate paleae* persistent, 5(to 7), whorled, erect at anthesis, at maturity somewhat expanded, open, concave, obscurely veined, broadly spatulate, 1.8–2.8 mm long, slightly surpassed by pistillate paleae, ± uniformly thickened, cartilaginous, greenish to brownish on both surfaces, abaxially glabrous or distally arachnoid, adaxially arachnoid to thinly lanuginose except for apicula, bases spreading at maturity, ± cuneate to rounded, apices ± strongly incurved, somewhat involute, entire, shortly scarious-apiculate, otherwise obtuse to rounded, neither spinose nor uncinat. *Pistillate florets* 5 to 11 in 1 or 2 spirally ranked series from proximal portions of re-

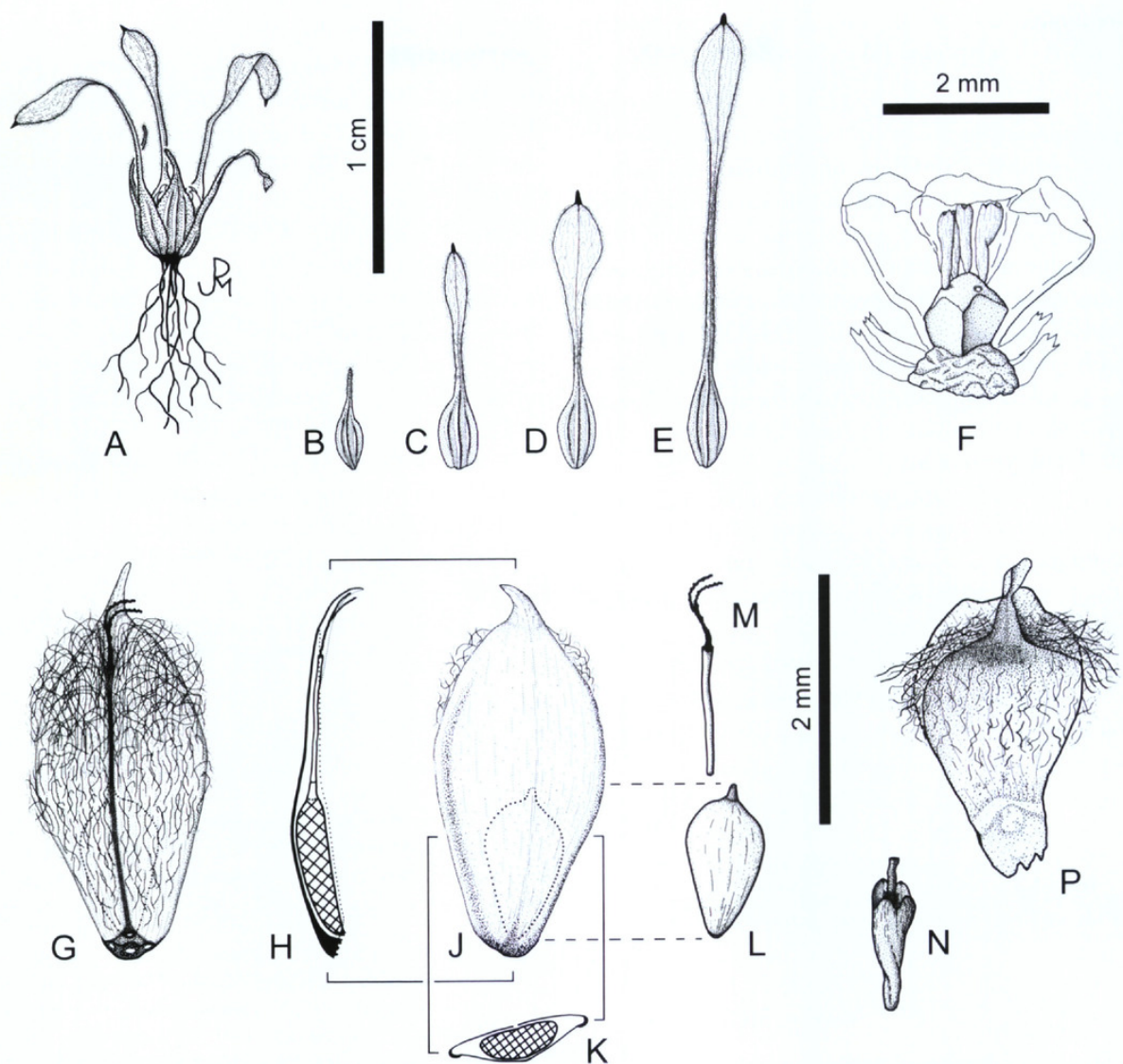


Figure 1. *Ancistrocarphus keilii* Morefield. —A. Plant in late maturity. —B–E. Leaves showing variation in size and shape. —F. Receptacle with staminate florets attached, showing outlines of staminate paleae (two in front removed) and pistillate paleae (bases only, those in front and back removed) in attached positions. G–K. Views of pistillate palea. —G. Adaxial view. —H. Diagram of longitudinal cross section in lateral view. —J. Abaxial view. —K. Diagram of transverse cross section in top view. —L. Mature cypsela, showing position within pistillate palea. —M. Pistillate corolla. —N. Staminate floret. —P. Staminate palea in adaxial view. Drawn from Keil 24561 & Oyler, OBI 054629 (B–D, G–P) and Hoffmann s.n., SBBG 063224 (A, E, and F).

ceptacles, each hidden and nearly enclosed by a subtending palea, *pistillate corollas* whitish, filiform, limb absent, styles exerted but surpassed by wings of subtending paleae; *staminate florets* 3 to 6 from receptacle apices, collectively and loosely subtended by whorl of staminate paleae, ovaries vestigial, up to 0.1 mm long, *staminate corollas* \pm concealed by pistillate paleae at anthesis, later visible, somewhat bilaterally symmetric, 0.9–1.3 mm long, \pm funnellform, glabrous, lobes 4, reddish purple to yellowish brown, deltate, blunt, unequal with 1 or 2 enlarged, stamens included, styles strongly exerted. *Cypselae* each remaining enclosed by a palea, brown, without black band, obovoid, apiculate, not angular, slightly incurved, not gibbous, ob-

compressed, $1.0\text{--}1.4 \times 0.5\text{--}0.6$ mm, glabrous, smooth, dull, corolla scars apical; *pappi* none.

Etymology. The new species is named in honor of David J. Keil (b. 1946) of California Polytechnic State University in San Luis Obispo, consummate student of and expert on the flora of California and the southwestern United States in general (and of Asteraceae in particular) and collector of the holotype. Because *Ancistrocarphus keilii* is likely to become a focus of conservation concern, and appropriate common names are very helpful in such circumstances, the common name Santa Ynez groundstar is here suggested, based on its geographic range and its distinctive habit.

The three gatherings of *Ancistrocarphus keilii* thus far known, including the two historical paratypes cited below, comprise about 180 individual plants. Based on these collections, the species appears confined to the Santa Ynez River drainage of southwest Santa Barbara County, California, where it is known from sandy soils in chaparral vegetation bordering oak woodlands between 40 and 130 m elevation. Plants in reproductive condition have been collected between 4 March and 12 April, and flowering and fruiting therefore likely occur sometime between late February and the end of April or early May in any given year.

In contrast with the five stiffly and inwardly hooked staminate paleae of *Ancistrocarphus filagineus*, the new species has no obvious dispersal mechanism. *Ancistrocarphus keilii* appears to grow annually in dense turf-like associations comprised of dozens to perhaps hundreds of individuals, suggesting that the cypselae germinate more or less in-place from previous years' populations. Lack of dispersal mechanisms is also consistent with the very limited geographic range of the species. It is allopatric with *A. filagineus*, which in Santa Barbara County is found farther inland to the east and north. Unlike many members of the subtribe, no other species of Filagininae have been found mixed with *A. keilii*, suggesting that its habitat is fairly distinctive.

Because of its very limited geographic range and dispersal ability, and its location in a region of relatively dense human population with a strong potential for future impacts, *Ancistrocarphus keilii* should be of immediate conservation concern. Its conservation status should be reviewed and carefully monitored by the State of California, the U.S. Fish and Wildlife Service, Vandenberg Air Force Base, and other appropriate agencies. Because of the small and inconspicuous nature of the plants, surveys resulting from such reviews may well show the species to be somewhat more widespread than current documentation indicates.

In phylogenetic reconstructions based on extensive morphologic data sets, including the new species and all other known taxa of Filagininae, *Ancistrocarphus* consistently resolved as the sister genus to *Hesperervax* (Morefield, 1992a). The two genera share strongly expanded staminate paleae among other features. *Ancistrocarphus* is apparently allied more with the genus *Evax* Gaertner and its segregates than with *Stylocline* Nuttall, where it has frequently been placed by virtue of sharing saccate pistillate paleae. The pistillate paleae of *Ancistrocarphus* differ from those of *Stylocline* and all other

Filagininae in having two prominent lateral veins in addition to the central one.

Addition of a second species to *Ancistrocarphus* renders the genus considerably more heterogeneous and partially bridges the gap between it and *Hesperervax* (near *H. acaulis* (Kellogg) E. Greene var. *acaulis* in particular). With the latter genus the new species shares the (often) stemless habit, strongly petiolate leaves, expanded petiole bases (though thinner and 3-veined in the case of *Ancistrocarphus keilii*), vestigial involucre, spatulate and obtuse staminate paleae, proximally expanded receptacle, and somewhat bilaterally symmetric 4-lobed staminate corollas. It is possible that *Ancistrocarphus keilii* is derived from a common ancestor of, or a hybrid between, the two genera. It currently shares the majority of its character states with *A. filagineus*, however, and the two consistently resolved as sister species in all phylogenetic analyses (Morefield, 1992a).

KEY TO *HESPERERVAX* AND THE SPECIES OF *ANCISTROCARPHUS*

- 1a. Receptacles setose among paleae; pistillate paleae open, obscurely veined, persistent, cypselae falling free; staminate paleae at maturity erect proximally, erect to strongly spreading distally, apices herbaceous throughout, obtuse to rounded *Hesperervax*
- 1b. Receptacles glabrous; pistillate paleae saccate, 3-veined (central vein sometimes thinning with age, becoming obscure), tardily falling, each completely enclosing a cypselae; staminate paleae at maturity spreading proximally, strongly incurved distally, apices at least shortly non-herbaceous, apiculate to acuminate ... *Ancistrocarphus*
- 2a. Caulescent (usually strongly so); leaves basal and cauline, sessile or broadly and indistinctly petiolate, bases attenuate, not or scarcely involucre; mature staminate paleae 2.7–4.1 mm long, surpassing the pistillate paleae, broadly lanceolate, apices long-spinose, uncinata, acuminate; cypselae 1.4–2 × 0.6–0.9 mm, with proximal black band; involucre of mostly 3 to 6, minute, scarious, persistent phyllaries; receptacles ± fungiform; apices of pistillate paleae with distinct, ovate wings ... *Ancistrocarphus filagineus*
- 2b. Acaulous; leaves all basal, strongly petiolate, petiole bases strongly expanded, closely involucre; mature staminate paleae 1.8–2.8 mm long, slightly surpassed by pistillate paleae, broadly spatulate, apices shortly scarious-apiculate, otherwise obtuse to rounded, neither spinose nor uncinata; cypselae 1–1.4 × 0.5–0.6 mm, without black band; involucre vestigial (simulated by paleae and petiole bases); receptacles obpan-duriform; apices of pistillate paleae with indistinct, lanceolate wings *Ancistrocarphus keilii*

Paratypes. U.S.A. **California:** Santa Barbara Co.,

Buellton to Lompoc, sandy soil, 30 Mar. 1929, *R. Hoffmann s.n.* (SBBG 063223); Buellton to Lompoc, sandy border of woods, 12 Apr. 1929, *R. Hoffmann s.n.* (SBBG 063224, NY, UC).

DIAPERIA DEPARTS EVAX

Three closely similar species of the central United States and adjacent Mexico have usually been placed in *Evax* (or in *Filago* L. when the two genera have been merged). As with *Hesperevax* of California and Oregon (Morefield, 1992c), however, these three species form a monophyletic group only distantly similar to typical *Evax* species (Morefield, 1992a), and they therefore warrant treatment as a separate genus, the earliest available name for which is:

Diaperia Nuttall, Trans. Amer. Philos. Soc. n.s., 7: 337. 1840. *Evax* Gaertner sect. *Diaperia* (Nuttall) A. Gray, Syn. Fl. N. Amer. 1(2): 229. 1884. TYPE: *Evax prolifera* Nuttall ex DC.

Calymmandra Torrey & A. Gray, Fl. N. Amer. 2(2): 262. 1842. *Evax* sect. *Calymmandra* (Torrey & A. Gray) A. Gray, Syn. Fl. N. Amer. 1(2): 229. 1884. TYPE: *Calymmandra candida* Torrey & A. Gray.

Filaginopsis Torrey & A. Gray, Fl. N. Amer. 2(2): 263. 1842. TYPE: *Evax multicaulis* DC. (lectotype, designated by Pfeiffer, 1874: 1347).

Based on phylogenetic analysis of 120 morphologic characters for all known species and varieties of Filagininae, *Diaperia* appears most closely related to *Evax* sect. *Filaginoides* Smoljaninova of the Mediterranean basin and central Asia, and particularly to *Evax eriosphaera* Boissier & Heldreich of the eastern Mediterranean region (Morefield, 1992a). The two groups of species are similar in many ways, but also exhibit several differences that likely justify placing *Evax* sect. *Filaginoides* in yet another genus separate from *Evax* (no name at that rank is yet available).

KEY TO DIAPERIA AND RELATED FILAGININAE

- 1a. Pappi present on some florets; or pistillate paleae predominantly saccate or spreading at maturity; or staminate paleae absent or spreading at maturity or adaxially hairy other Filagininae
- 1b. Pappi absent on all florets; pistillate paleae predominantly open, flat to loosely folded, remaining erect; staminate paleae present, remaining erect, glabrous or abaxially hairy.
 - 2a. Paleae persistent, free throughout
. *Evax* (excluding sect. *Filaginoides*)
 - 2b. Paleae falling, staminate and at least inner pistillate ones as a unit, cohering distally by dense tangled hairs.
 - 3a. Staminate paleae about equaling pistillate paleae, open throughout, apices acuminate or cuspidate, very shortly

glabrous distal to pubescence, \pm hyaline, erect, not forming cavities in the mass of hairs; plants always compact, less than 3 cm high, pulvinate to rounded *Evax* sect. *Filaginoides*

- 3b. Staminate paleae slightly enlarged, becoming \pm closed proximally, apices obtuse, sericeous-lanuginose to tips, \pm herbaceous, somewhat spreading at maturity, thereby forming obconic cavities in the mass of hairs; plants usually with well-developed stems 3–25 cm high, simple or loosely branched *Diaperia*

Diaperia consists of the following three species and two additional varieties of the central United States and northern Mexico, for which typification and current nomenclature are here established, and of which one variety is described as new.

Diaperia candida (Torrey & A. Gray) Benth. & Hooker f., Gen. Pl. 2(1): 298. 1873. *Calymmandra candida* Torrey & A. Gray, Fl. N. Amer. 2(2): 262. 1842. *Evax candida* (Torrey & A. Gray) A. Gray, Syn. Fl. N. Amer. 1(2): 230. 1884. *Filago candida* (Torrey & A. Gray) Shinners, Sida 1: 252. 1964. TYPE: U.S.A. Texas: s.d., *T. Drummond* 177 (holotype, GH; isotypes, BM[3], CGE, GH, K[2], OXF).

Some of the type sheets are dated 1835 or 1836, but these apparently reflect the years various sets were received, since Thomas Drummond died in Cuba in March 1835. The plants on all the sheets appear to be of the same gathering. The notation of “San Filipe” on one sheet at K could refer to locations in present-day Austin or Hidalgo Counties, Texas, both areas having produced more modern specimens of *Diaperia candida*. The species occupies a limited range covering eastern Texas and the adjacent corners of southwestern Arkansas, northwestern Louisiana, and southeastern Oklahoma.

Within *Diaperia*, *D. candida* is aberrant in its bisexual disk florets and its reported chromosome complement of $2n = 7II$ (Keil & Pinkava, 1976) and might eventually justify resurrection of the monotypic genus *Calymmandra* (see above), though I hesitate to propose this without further study. The chromosome count is of particular interest, as all of the other 25 counted species of Filagininae have $2n = 14II$ (representatives of *Evax*, *Filago*, *Logfia* Cassini, *Micropus* L., *Psilocarphus* Nuttall, and *Stylocline*) or $2n = 13II$ (a few *Diaperia* and *Evax*). This might imply that the vast majority of Filagininae are tetraploid with *Diaperia candida* being an ancestral diploid, a hypothesis with no phylogenetic support (Morefield, 1992a). It is also possible that Keil and Pinkava (1976) accidentally

mis-translated a meiotic count of $n = 14$ to a mitotic equivalent of 7II instead of 14II.

Diaperia verna (Rafinesque) Morefield, comb. nov. Basionym: *Evax verna* Rafinesque, Atlantic J. 6: 178. 1833. *Filago verna* (Rafinesque) Shinnery, Sida 1: 253. 1964. TYPE: U.S.A. Louisiana: Claiborne Parish, Salem Cemetery E of La. 9 in Athens, Sec. 6, T19N, R6W, 5 May 1979, R. D. Thomas et al. 64261 (neotype, designated here, NLU 157605; isotypes, COLO 388762, NY, RSA 301867, UT 107742, UTEP 20825, VDB 185027).

Evax multicaulis DC., Prodr. 5: 459. 1836. Syn. nov. *Diaperia multicaulis* (DC.) Nuttall, Trans. Amer. Philos. Soc. n.s., 7: 338. 1840. *Filaginopsis multicaulis* (DC.) Torrey & A. Gray, Fl. N. Amer. 2(2): 263. 1842. *Filago nivea* Small, Bull. Torrey Bot. Club 24: 333. 1897, non *Filago multicaulis* Lamarck, Fl. Franc. 2: 59. 1779. TYPE: U.S.A. Texas: "in campis Sn Fernando de Bexar," June 1829, J. L. Berlandier 2109 (lectotype, designated here, G-DC, IDC microfiche 800. 906.III.4 at RSA).

The name *Evax verna* Rafinesque (1833a) was heretofore of uncertain application. De Candolle (1836: 459) mentioned the name (misspelled as "*Evax vera*") under "species dubia" at the end of his *Evax* treatment, noting "an huic generi adnumeranda?" ("perhaps to be counted with this genus?"). Torrey and Gray (1842: 263) cited *Evax verna* in synonymy with their (thus incorrect) combination *Filaginopsis multicaulis*, citing only "Raf.! herb." It is unclear from the context whether this citation referred to a specimen seen or just to the reprinted description in *Herbarium Rafinesquianum* (Rafinesque, 1833b). In any case, neither I nor apparently any other subsequent workers have been able to locate original type or lectotype material either at GH or at numerous other herbaria checked, thus necessitating designation of a neotype. Gray's (1884) *Synoptical Flora of North America* recognized *Evax multicaulis* and all the other species now included in *Diaperia*, but did not mention *Evax verna* in any context. Shinnery (1964) took up Rafinesque's epithet again without explanation for the species including *Evax multicaulis*, and subsequent workers have used *Evax verna* or *Evax multicaulis* in about equal proportions.

In the absence of any original type material, only Rafinesque's (1833a: 178) protologue is available to guide selection of a neotype: "20. *Evax verna* Raf. Canescens sericea, Caule gracile subramoso Fol. laxis semiamplex. obl. obtusiusc. infimis cuneatis, Fl. solit term. bract. ineq. fol. similis, periantho semiglob. squamis paucis subrot.—Texas & Louisiana, triuncial, fl. white, floscules greenish."

In some respects, Rafinesque's description above does not match the plants de Candolle (1836: 459) named *Evax multicaulis*. In particular [my interpretations in brackets], the traits "fol. . . . semiamplex." (with the leaves . . . somewhat clasping), "fl. solit. . . ." (with the "floscules" [glomerules? capitula? flowers?] solitary), and "periantho . . . squamis paucis subrot." (with the perianth [involucre] . . . with scales [phyllaries] few, subrotund) are not consistent with the type material of *Evax multicaulis*.

It is clear from Rafinesque's "triuncial" (3 inches high), however, that he was probably describing young and incompletely developed material and that, allowing for some misinterpretation of structures, such material could easily have belonged to the same species de Candolle later named *Evax multicaulis*. The largest plants of the young neotype material selected above are about 3 inches high, and their incompletely developed capitular leaves do very much resemble "subrotund scales" of involucre (though the true involucre is vestigial in this species). Based on the description "fl. white, floscules greenish," the term floscules would most likely refer to the glomerules of capitula, and these can indeed be solitary on young plants before they have branched, as they are on several plants of the neotype material. The cauline leaves of the neotype material are slightly expanded near the bases, giving the impression that they could be "somewhat clasping," although these bases are usually planar and not folded about the stem. Given the size of the material that Rafinesque described, then, the neotype selected above is not in serious conflict with the protologue (Greuter et al., 2000, Art. 9.17).

Furthermore, no better fit to the protologue can be found among 3-inch-high plants of any other annual Gnaphalieae (as reasonably implied by Rafinesque's placement in *Evax*) known from Texas and Louisiana then or now, including species of *Diaperia*, *Gnaphalium* L., and *Facelis* Cassini. These species have plants that are not yet in flower when 3 inches high, numerous non-terminal glomerules, involucre that are far from hemispheric, numerous obvious phyllaries that are not subrotund, and/or no structures that could be confused with a few subrotund phyllaries. The only other candidate species that comes close to matching the protologue is *Diaperia candida*, and no workers have ever suggested that *Evax verna* belonged with that species. The neotype above was therefore selected to preserve current and previous application of *Evax verna* to the species de Candolle named *Evax multicaulis*.

Collection numbers appeared on the neotype labels as "64261 & 2122," the second number clear-

ly belonging to *L. Lewis* or one of the other secondary collectors listed.

The additional type materials of *Evax multicaulis* that I examined, but rejected as lectotype, were: U.S.A. Texas: "in campis area S[an] Antonio de Bexar," variously June 1829 or s.d., *J. L. Berlandier 1958* (syntype, G-DC, IDC microfiche 800. 906.III.5 at RSA; isosyntypes, GH, K, LE, MO, OXF, PH); "Lac de St. Nicolas pres la . . . [illegible] . . . St. Spirit," June 1829, *J. L. Berlandier 1958* (syntype, G-DC, IDC microfiche 800. 906.III.4 at RSA); "in campis S[an] Fernando de Bexar," variously June 1828 or June 1829 or s.d., *Berlandier 2109* (isosyntypes, BM, GH, K, LE). Shinnars (1951) took both locations cited in de Candolle's (1836: 459) protologue to be in present-day Texas. All of the type material seen definitely represents the same taxon. Among the three G-DC syntypes found, the location and date information on the lectotype chosen above most clearly matches the protologue. (This is contrary to my earlier annotations of *Berlandier 1958* specimens as isolectotypes, which should now be corrected.)

A specimen of *Diaperia verna* (var. *verna*) at CAS (U.S.A. Texas: "Camp bei la Grange," s.d., *A. Scheele* [or *F. Roemer?*] s.n., CAS 7254 [Hb. A. Prager]) may represent type material of *Filago texana* Scheele. The description of *Filago texana* in the protologue (Linnaea 22[2]: 164. 1849), however, refers to a different plant with bisexual and pappose central florets. The plants named *Micropus minimus* DC., Prodr. 5: 461. 1836, likely also represent this species, but the type specimens examined (Mexico. Monterrey: "pres Monterey," Jan. 1828, *Berlandier 1861*, BM, F [Hb. Delessert photograph], LE) are all too young to be determined with certainty, though no other similar species are known from that state. *Evax nivea* (Small) Cory, Rhodora 38: 407. 1936, is a superfluous combination based on *Filago nivea*. The range of *Diaperia verna* is centered in Texas, and extends to Arizona, Arkansas, Georgia, Oklahoma, Louisiana, South Carolina, and northern Mexico.

I agree with previous workers that the material named *Filaginopsis drummondii* Torrey & A. Gray is best treated as varietally distinct from *Diaperia verna*, necessitating the following combination:

***Diaperia verna* (Rafinesque) Morefield var. *drummondii* (Torrey & A. Gray) Morefield, comb. nov.** Basionym: *Filaginopsis drummondii* Torrey & A. Gray, Fl. N. Amer. 2(2): 263. 1842. *Diaperia drummondii* (Torrey & A. Gray) Benth. & Hooker f., Gen. Pl. 2(1): 298. 1873. *Evax multicaulis* DC. var. *drum-*

mondii (Torrey & A. Gray) A. Gray, Syn. Fl. N. Amer. 1(2): 229. 1884. *Filago verna* (Rafinesque) Shinnars var. *drummondii* (Torrey & A. Gray) Shinnars, Sida 1: 253. 1964. *Evax verna* Rafinesque var. *drummondii* (Torrey & A. Gray) Kartesz & Ghandi, Phytologia 71: 272. 1991. TYPE: U.S.A. Texas: s.d., *T. Drummond 176* (lectotype, designated by Shinnars (1951: 126), GH; isotypes, BM[2], CGE[3], GH[2], K[2], NY[2], OXF, PH).

Among all the type material cited above, the sheet at NY from the Torrey Herbarium and the two of three sheets at GH bearing "*Filaginopsis drummondii*" in what appears to be Asa Gray's handwriting are appropriate candidates for the lectotype specimen. All of the plants on all specimens cited above are uniform in appearance and seem to be from the same gathering. All but the lectotype sheet bear Drummond's collection number 176, likely reflecting a simple omission. The different years (1835, 1836, 1839) appearing on a few sheets doubtless indicate when the specimens were received, since Thomas Drummond died in Cuba in March 1835. Nothing in the protologue supports rejection of any of the three lectotype candidates over the others, so I here follow Shinnars's (1951) designation and annotation (as "type") of the unnumbered specimen at GH as lectotype.

Some of the isotypes variously bear "Texas III" or "Third Collection" or "Coll. III," apparently referring to a particular set of Drummond specimens. One of the sheets at K also indicates the location "San Felipe." This could refer to locations in present-day Hidalgo County, Texas, where variety *drummondii* is also documented by two gatherings in 1941, or in Austin County, Texas, whence I have seen no specimens although occurrence there is plausible. The variety occurs along and up to 300 km inland from the Gulf of Mexico in Texas, with a disjunct record in coastal Alabama. It likely also occurs in adjacent Tamaulipas, Mexico.

***Diaperia prolifera* (Nuttall ex DC.) Nuttall, Trans. Amer. Philos. Soc. n.s., 7: 338. 1840. *Evax prolifera* Nuttall ex DC., Prodr. 5: 459. 1836. *Filago nuttallii* Shinnars, Sida 1: 253. 1964, non *Filago prolifera* Pomel, Nouv. Mat. Fl. Atl. 1: 47. 1874. TYPE: U.S.A. Oklahoma: Choctaw Co., Red River at Kiamichi River, prairies, June 1819, *T. Nuttall* s.n. (holotype, G-DC, IDC microfiche 800. 906.III.3 at RSA; isotypes, BM, CGE, GH[2], K[2], NY, PH[2]).**

Diaperia prolifera occupies a broad crescent from the intermediate and shortgrass prairies of western

South Dakota and southeastern Montana, south and east to eastern New Mexico, Texas, and southwestern Arkansas, and then to the chalk prairies of southern Mississippi and southern Alabama. The following is a long-collected but previously unnamed variant of *Diaperia prolifera* from southeastern New Mexico, western Texas, and southwestern Oklahoma:

Diaperia prolifera (Nuttall ex DC.) Nuttall var. ***barnebyi*** Morefield, var. nov. TYPE: U.S.A. New Mexico: Lincoln Co., 12 road mi. E of Picacho Post Office, along draws in dry limestone hills, with *Fouquieria* & *Dasyllirion*, 1440 m, 22 May 1987, R. C. Barneby 18233 (holotype, NY; isotypes, GH, MO, NMC, RSA, TEX, UTEP).

Diaperiae proliferae var. *proliferae* similis, sed plantis ubique argenteis arcte sericeis non laxe lanuginosis; foliis juxta capitula valde indurescentibus basaliter carinatis et semper erectis involucrum rigidum secundarium formantibus; ramis capitulescentiarum valde ascendentibus erectisve saepe inaequalibus aliquot valde reductis; glomerulis amplissimis 1 (ad 3) (ad invicem 4 ad 40+) capitula continentibus; receptaculis anguste conoideis 0.9–1.1 mm longis 2–2.4 plo longioribus quam latoribus; et paleis pistillatis longissimis 2.5–3.2 (ad invicem 3.3–4.0) mm longis.

Caulescent annuals 3–9 cm high from slender taproots, plants densely and tightly silvery-sericeous throughout; *stems* single, erect, or 2 to 5 from base and strongly ascending, usually branched throughout, rarely simple, slender; *branches* sympodial or sometimes appearing monopodial by reduction or failure of development. *Leaves* basal and cauline, gradually enlarged and congested up stems, alternate, simple, sessile or broadly and indistinctly petiolate, up to 11×3 mm; *bases* \pm attenuate, herbaceous or becoming thickened and indurate among capitula, 1-veined; *blades* oblanceolate to spatulate or obovate, \pm planar to undulate, pliant, entire, uniformly sericeous, primary vein 1, subordinate venation obscure, apices usually obtuse to narrowly rounded; *capitular leaves* generally broadest, often appearing whorled, usually mixed with, subtending, and clearly exerted from between individual capitula in glomerules, abruptly differentiated from phyllaries and paleae, longest 2–10 \times capitula lengths, *bases* erect, carinate, thickened, indurate, forming rigid secondary involucre. *Capitulescences* 1 to 5, cymiform, sympodial, strictly pseudo-polytomous or dichasiform, or sometimes appearing monopodial by reduction or failure of branch development, each consisting of 3 to 20+ capitula; *branches* all strictly subtending glomerules, arising among capitular leaves, strongly as-

cending to erect, equal or often unequal with some scarcely or not at all elongating; *capitula* disciform, fully paleate, sessile, borne singly or rarely in dense glomerules of 2 or 3, all terminal at branch forks and apices, \pm erect, cylindric to \pm ellipsoid, $3.5\text{--}4.5 \times 1.5\text{--}2.0$ mm; *involucres* of (2 to) 4 to 6 reduced, empty phyllaries similar to and seemingly derived from paleae, otherwise functionally simulated by paleae and capitular leaves; *receptacles* conic, 0.9–1.1 mm long, $\pm 2\times$ as long as wide, glabrous; *paleae* about 18 to 30 in 4 to 6 spirally ranked series, erect to ascending, free proximally, distally all or at least the inner coherent by tangled hairs, falling as a unit (sometimes tardily so or outermost series persistent), veins parallel, obscure, midveins not reaching apices, apices densely lanuginose to sericeous; *pistillate paleae* in 3 to 5 series, imbricate, mostly open, \pm planar to concave, gently incurved, oblanceolate to oblong, longest 2.5–3.2 mm long, *margins* of pistillate paleae continuous with and not abruptly differentiated from bodies, not winged, gradually thinning, \pm scarious, shiny, translucent, not conspicuously striate, entire, abaxially lanuginose to glabrous, *bodies* yellowish, not gibbous, somewhat thickened, papery to cartilaginous, abaxial surfaces \pm rounded transversely, glabrous proximally, *apices* incurved (with styles) over staminate florets at anthesis, at maturity erect, \pm planar to concave; *staminate paleae* about 3, slightly enlarged, open distally, becoming \pm closed proximally, concave medially, \pm spatulate, mostly 1.5–2.5 mm long, slightly surpassing pistillate paleae at maturity, papery to somewhat cartilaginous, greenish to brownish on both surfaces, abaxially \pm lanuginose to tips, adaxially \pm glabrous, bases erect, acute to acuminate, apices somewhat spreading at maturity, forming obconic cavities in the mass of hairs, entire, \pm herbaceous, obtuse to rounded, neither spinose nor uncinat. *Pistillate florets* 13 to 27+ in 3 to 5 spirally ranked series, \pm evenly distributed on receptacle, *pistillate corollas* whitish, filiform, limb absent, styles strongly exerted but surpassed by subtending paleae; *staminate florets* about 3 from receptacle centers, each subtended by a staminate palea, ovaries partly developed, abortive, 0.4–0.6 mm long, *staminate corollas* \pm concealed by pistillate paleae at anthesis, later exposed by spreading staminate paleae, radially symmetric, 1.4–2.0 mm long, funnelform, glabrous, lobes usually 4, yellowish brown, deltate, blunt, equal, stamens included, styles not or scarcely exerted. *Cypselae* falling free, light to dark brown, without black band, \pm obovoid, obtuse, somewhat angular, \pm straight, not gibbous, obcompressed, mostly $0.9\text{--}1.2 \times 0.5\text{--}0.7$ mm, gla-

brous, minutely papillate, dull to \pm shiny, corolla scars apical; *pappi* none.

Etymology. The new variety is named with gratitude for the late Rupert C. Barneby (1911–2000), who immediately recognized the unusual characteristics of this plant as few before him had, who supplied the type gathering (and the specimens of *Micropsis dasycarpa* discussed elsewhere in this paper), who extended characteristic courtesy and assistance during and beyond my years as a student, and whose eloquent and voluminous lifetime contributions to the systematics and taxonomy of Fabaceae remain a priceless resource and inspiration to students of botany the world over. Barneby rabbit tobacco is here recommended as a common name for this variety, to be consistent with other vernacular names used in the genus.

As is evident from the paratypes cited below, specimens of *Diaperia prolifera* var. *barnebyi* have been known since 1852, but the geographic and ecologic significance of the variation was not previously recognized. Based on all the type material, *Diaperia prolifera* var. *barnebyi* occurs from west Texas to southeast New Mexico and extreme southwest Oklahoma, a range from which variety *prolifera* appears largely absent and which comprises the southwest corner of the species' range. The variety *barnebyi* clearly is the xeromorphic phase of the species and does not appear to be particularly weedy. Both varieties approach the Rio Grande just north of Coahuila, Mexico, and may eventually be documented from that country.

Diaperia prolifera var. *barnebyi* is found on open, dry, shallow, rocky or gravelly soils often derived from limestone or gypsum, sometimes in drainages, disturbed areas, or near other sources of extra moisture, at elevations between about 500 and 1500 m. Based on phenology apparent in the type material, plants of the new variety undergo their reproductive cycles between about mid April and mid June.

The relatively large geographic range of variety *barnebyi* ought to render it fairly invulnerable from a conservation standpoint. There are, however, few recent collections among the type and paratype specimens cited herein, which comprise all specimens currently known to me. Attempts should be made to relocate as many of the historical sites as possible, and to find additional, previously undocumented sites, before the variety is assumed to be secure from extinction.

Where the ranges of variety *barnebyi* and variety *prolifera* overlap in central Texas and Oklahoma, specimens have been collected that are intermediate in characteristics between the two types. Specimens I have examined

that are of uncertain varietal placement, and that are explicitly *not* considered paratypes (which are listed farther below), include: U.S.A. **Oklahoma:** Woods Co., near Alva, prairie hillside in old road, 10 May 1914, *G. W. Stevens 3053* (US); 16 mi. W & 3 mi. S of Alva, top of hill, short sparse grass, 17 May 1972, *S. Bellah 71* (BRY). **Texas:** Bandera Co., Mystic Canyon, Dry Canyon Creek 0.5 mi. E of Real Co., limestone plateau, 2200 ft., 4 June 1975, *J. Smith 576* (LL); Bell Co., 4 mi. NE of Salado, calcareous gravel, oak-juniper woodland, 12 May 1953, *H. D. Ripley & R. C. Barneby 11059* (NY); McLennan Co., 3 mi. S of McGregor, 26 May 1946, *C. L. York 46105* (TEX); Menard Co., Menard, 26 Apr. 1933, *H. Mahony s.n.* (TEX); Randall Co., Palo Duro Canyon, 15 June 1929, *B. C. Tharp 6495* (LL, TEX); Terrell Co., Blackstone Ranch, 13 mi. S of Sheffield, cedar-sotol mesa top, 2750 ft., 12 June 1949, *G. L. Webster 244* (MICH, TEX).

Typical material of the two varieties may be separated as follows:

KEY TO THE VARIETIES OF *DIAPERIA PROLIFERA*

- 1a. Plants loosely lanuginose, grayish to greenish; capitula 4 to 40+ in largest glomerules, receptacles wider than long; capitar leaves proximally pliant to \pm rigid, not or scarcely carinate, often \pm spreading, loosely involucrate; capitulescence branches mostly spreading to ascending; longest paleae 3.3-4.0 mm long
 *Diaperia prolifera* var. *prolifera*
- 1b. Plants tightly sericeous, silvery; capitula borne singly or rarely in glomerules of 2 or 3, receptacles $\pm 2\times$ as long as wide; capitar leaves proximally thickened, indurate, carinate, erect, forming rigid secondary involucres; capitulescence branches strongly ascending to erect; longest paleae 2.5-3.2 mm long
 *Diaperia prolifera* var. *barnebyi*

Paratypes. U.S.A. **New Mexico:** Eddy Co., Guadalupe Mountains, near mouth of Dark Canyon, rocky N slope, 23 Apr. 1932, *H. Wilkens 1591* (PH); Lincoln Co., 3 mi. E of Picacho, draw in limestone hills, caliche gravel, 4800 ft., 2 May 1986, *R. C. Barneby 18068* (NMC, NY). **Oklahoma:** Harmon Co., 5.5 mi. S of Hollis, shallow land, overgrazed pasture with *Prosopis*, 13 May 1950, *U. T. Waterfall 9414* (ARIZ). **Texas:** stony hills of the Pecos, May 1852, *C. Wright 1406* (BM, GH, LE, NY, PH, US); Hardeman Co., 2 mi. W of Acme, gypsum outcrop, 1 June 1957, *D. S. Correll 16528* (LL); Lubbock Co., Lubbock sewer farm, 3 June 1930, *D. Demaree 7752* (GH, LE, MO, MONTU, WIS); Terrell Co., Langtry to Dryden, 14 June 1931, *B. C. Tharp 8814* (TEX).

LOGFIA SURVIVES OGLIFA: A TALE OF TWO ANAGRAMS

Since conservation of the genus *Filago* L. with *F. pyramidata* L. as the type (Buchheim & Wagenitz, 1964; Greuter et al., 2000, Appendix IIIA.E.3) there have been, among European workers, two divergent approaches to the circumscription of *Filago* and its relatives. The first approach, exemplified by Wagenitz (1969), has been to recognize a large and heterogeneous *Filago* with several subgenera and

sections, generally including *Evax* (and by implication *Diaperia* and *Hesperevax* of North America, also included in *Evax* until more recently). Justification of this approach has been based on the apparent recombination, in “intermediate” species groups, of various character states distinguishing the type species of *Filago* and *Evax*, and also by the existence of occasional natural hybrids among species of the various subgenera and sections (Wagenitz, 1969).

If applied to North American taxa, this “Wagenitz approach” would immediately require inclusion of *Stylocline*, a close relative of *Filago* subg. *Oglifa* (Cassini) Grenier (Morefield, 1992a), in a yet more heterogeneous *Filago*. By logical extension, *Micropus* would fall next, and thereafter all the remaining genera of Asteraceae subtribe Filagininae would have to be lumped.

I prefer the other approach, first championed by Cassini (1819, 1822) and more recently by Holub (1975, 1976, 1998), that recognizes the various recombinant species groups as smaller, more homogeneous genera. The various combinations of typical *Filago* and *Evax* character states in these groups appear to identify natural and easily recognizable genera (as Filagininae go) that are either monophyletic or minimally paraphyletic and that often exhibit unique synapomorphies (Morefield, 1992a). This approach to classifying Filagininae has been applied to the North American taxa by resurrection and segregation of the genera *Ancistrocarphus* (Morefield, in Hickman, 1993), *Diaperia* (this paper, above), and *Hesperevax* (Morefield, 1992c). Holub (1998: 107) completed the process by transferring to *Logfia* the three North American species traditionally placed in *Filago* (*F. arizonica* A. Gray, *F. californica* Nuttall, and *F. depressa* A. Gray).

I agree with Holub's (1975, 1976, 1998) circumscription of *Logfia* to include *Oglifa* (Cassini) Cassini. When the *International Code of Botanical Nomenclature* (ICBN; Greuter et al., 2000) is applied, however, priority of *Logfia* over *Oglifa* is ambiguous and may need to be established via conservation in order to preserve current usage. When Cassini (1819) first split *Filago* into smaller and more natural units, he named three of them using the anagrams *Gifola*, *Logfia*, and *Oglifa*. Each of these taxa was clearly accepted by Cassini at the time (ICBN, Art. 34.1) and was provided with a description and a clear indication of the type species. Each except *Logfia* was also provided with a clear indication of its rank, *Gifola* as a genus, and *Oglifa* as a subgenus. The type of *Gifola* Cassini belongs to the same genus as the type now conserved for *Filago*.

All earlier workers have interpreted Cassini's (1819: 143–144) subgenus *Oglifa* to have been associated with the genus *Filago*, by the title and context of his article and by his designation of *Filago arvensis* L. as type. A careful reading of Cassini's article, however, shows that he explicitly differentiated subgenus *Oglifa* from a portion of *Gnaphalium* (as translated from the French, from “many true *Gnaphalium*, such as *G. luteo-album*, *sylvaticum* and *uliginosum*”), not from *Filago*, and that he explicitly limited membership in *Filago* to a single species, *F. pygmaea* L. Cassini (1819: 143), therefore, definitely associated his new name with *Gnaphalium* (ICBN Art. 33.1) and validated *Gnaphalium* L. subg. *Oglifa* Cassini, a name not heretofore recognized. Cassini (1822: 564) later validated *Oglifa* at the generic rank.

Validation of *Logfia* in 1819 was questionable, and may not have occurred until 1822. Cassini (1819: 143) began his protologue of *Logfia* by listing the two *Filago* species he included therein, stating that those species belonged in a genus other than *Gifola* Cassini (the latter having been described earlier in the same publication), and listing the differential traits. He then stated (as translated from the French), “I thus join together these two species in a particular genus or subgenus, of which *F. gallica* must be regarded as the type . . .,” after which he went on to name and formally describe the taxon *Logfia*.

Even though Cassini (1819: 143) said that the two species of his new taxon “differ generically from *Gifola*,” it does not necessarily follow that he was ranking *Logfia* itself as a genus, only that *Logfia* was part (or all) of a genus other than *Gifola*. By designating *Logfia* as a “genus or subgenus,” it can be argued that Cassini either (1) published alternate names in 1819 (as allowed by ICBN, Art. 34.2), or (2) expressed taxonomic doubt about the placement of *Logfia* (as allowed by ICBN, Art. 34.1), resulting in no “clear indication of its rank” and leaving it valid but unranked in 1819 (as allowed by ICBN, Art. 35.3). In the first case, *Logfia* was valid at generic rank in 1819 and has priority over *Oglifa*. (*Logfia* was not valid at subgeneric rank in 1819, however, because it was not definitely associated with the name of a genus, both *Gifola* and *Filago* having been explicitly excluded.) In the second case, *Logfia* was validated at generic rank by Cassini (1822: 564) simultaneously with *Oglifa*, and then Lessing (1832: 333) established priority of *Oglifa* over *Logfia* in accordance with ICBN, Art. 11.5.

While I believe that the second case above (application of Arts. 34.1 and 35.3) represents the

more logically rigorous interpretation of Cassini's words, Holub (1975, 1976, 1998; but not Chrtek & Holub, 1963) and the various nomenclatural indices have followed the first interpretation instead, and it would now be nomenclaturally disadvantageous to use *Oglifa* in place of *Logfia*. Therefore, pending a proposal to conserve *Logfia* over *Oglifa* (in prep.), I agree that the consequences of the rules are doubtful in the case of *Logfia* and that established custom should be followed (ICBN, Preamble 10). The nomenclature of *Logfia* is summarized as follows:

Logfia Cassini, Bull. Sci. Soc. Philom. Paris 1819: 143. 1819 [as "genre ou sous-genre"], Cassini, in F. Cuvier, Dict. Sci. Nat., ed. 2, 23: 564. 1822. *Filago* L. subg. *Logfia* (Cassini) Grenier, Fl. Jurass. (2): 431. 1869. *Filago* L. sect. *Logfia* (Cassini) Boissier, Fl. Orient. 3: 248. 1875. TYPE: *Filago gallica* L.

Oglifa (Cassini) Cassini, in F. Cuvier, Dict. Sci. Nat., ed. 2, 23: 564. 1822. *Gnaphalium* L. subg. *Oglifa* Cassini, Bull. Sci. Soc. Philom. Paris 1819: 143. 1819. *Filago* L. sect. *Oglifa* (Cassini) DC., Prodr. 6: 248. 1838. *Filago* L. subg. *Oglifa* (Cassini) Grenier, Fl. Jurass. (2): 430. 1869. TYPE: *Filago arvensis* L.
Xerotium Bluff & Fingerhuth, Comp. Fl. German. (sect. 1) 2: 343. 1825. TYPE: *Gnaphalium minimum* J. E. Smith.

Species of *Logfia* are indigenous to Europe, central Asia, northern Africa, and southwestern North America, and have been widely introduced outside those areas. Combinations under *Logfia* were validated by Holub (1998) for the three North American species listed earlier. When removed from *Filago*, however, an earlier specific epithet becomes available for the species long known as *Filago californica*, and must be used:

Logfia filaginoides (Hooker & Arnott) Morefield, comb. nov. Basionym: *Gnaphalium filaginoides* Hooker & Arnott, Bot. Beechey. Voy. (8): 359. 1839. TYPE: U.S.A. "California": s.d., *D. Douglas* s.n. (lectotype, designated here, K [Hb. Hook]).

Filago californica Nuttall, Trans. Amer. Philos. Soc. ser. 2, 7: 405. 1841. Syn. nov. Non *Filago filaginoides* (Karelin & Kirilow) Wagenitz, Willdenowia 5: 417. 1969. *Oglifa californica* (Nuttall) Rydberg, Fl. Rocky Mts. 914. 1917. *Logfia californica* (Nuttall) Holub, Preslia 70: 107. 1998. TYPE: U.S.A. California: "near Santa Barbara," Apr. 1836, *T. Nuttall* s.n. (holotype, BM [Hb. Nuttall]; isotype, PH 1383).
Filago californica Nuttall var. *tomentosa* Nuttall, Trans. Amer. Philos. Soc. ser. 2, 7: 406. 1841. Syn. nov. TYPE: U.S.A. California: Santa Luis Obispo Co., USFS trailhead area on Hwy. 166 NE of Tepusquet

Canyon Rd., 9 Apr. 1998, *D. Keil* 26673-A (neotype, designated here, OBI 055308).

Hooker and Arnott (1839: 359) validated *Gnaphalium filaginoides* as "*2. G.? filaginoides*" (ICBN, Art. 34.1) but designated no type. Specimens were found on sheets at BM, GH, and K, each labeled with some abbreviation or permutation of *Gnaphalium filaginoides*. A Douglas specimen on a sheet stamped "Herbarium Hookerianum 1867" at K is selected here as the lectotype because it is the only candidate definitely seen by one of the authors of the taxon, and was gathered by a frequent collector of Hooker's and Arnott's new taxa. There is also a pencil drawing of the species on the sheet. Two other specimens on the same sheet (*Nuttall* s.n. and *Coulter* 352) also represent the same species. The specimens labeled *Gnaphalium filaginoides* on the sheets at BM [Hb. Nuttall] and GH were not provided with collector names, but are very similar to the lectotype specimen, and may represent isolecotypes.

Filago parvula Torrey & A. Gray, Fl. N. Amer. 2 (3): 432. 1843, was a superfluous name for *Gnaphalium filaginoides*. The indexed name "*Gnaphalium filaginoides* Bojer ex DC." (de Candolle, 1837 [1838]: 219) was not accepted by its author, who validated *Stenocline filaginoides* DC. instead. It is therefore invalid and should be removed from all plant name indices. *Logfia filaginoides* is most abundant in California and adjacent northwestern Mexico, extending eastward across a narrowing triangular area to extreme western Texas.

Other specimens located at GH and K [Hb. Hook.] likely represent additional isotypes of *Filago californica*, but too few label data accompany them to permit certainty. No original material, type or otherwise, could be located for *Filago californica* var. *tomentosa*, nor was any designated in the protologue, necessitating selection of a neotype. The protologue diagnosed the variety as having "leaves crowded and tomentose, flower clusters approximating in spikes," and indicated that both it and variety *californica* were found "near St. Barbara, Upper California." The neotype specimen selected above matches this diagnosis exactly, and is the "nearest" to Santa Barbara of any similar specimens I have seen. It was collected just across the Santa Barbara/San Luis Obispo County line near the Cuyama River (*D. J. Keil*, pers. comm., 19 Aug. 2004). As neotypified, *Filago californica* var. *tomentosa* appears to represent an occasional ecotype of coastal and chaparral areas, and does not merit taxonomic recognition.

MICROPSIS ARRIVES

Micropsis DC. consists of five species native to temperate South America and found variously in moist or dry, often sandy or alkaline soils from central Chile to Paraguay and southern Brazil, south to the Juan Fernández archipelago (Bustamante, 1979; Cabrera, 1963). Its species are unique among Filagininae for their densely long-hairy cypselae and for the saccate, nearly closed, and often lacerate bisexual paleae, and may be only convergently related to the rest of the subtribe. Phylogenetic analysis of morphologic characters (Morefield, 1992a) placed the genus closest to *Stuartina mueleri* Sonder of Australia.

In 1988 the late Rupert C. Barneby sent to me for identification a specimen of Asteraceae from the central gulf coast area of Texas. This turned out to be *Micropsis dasycarpa* (Grisebach) Beauverd, and the name and typification are here newly reported for the *Flora of North America* project:

Micropsis dasycarpa (Grisebach) Beauverd, Bull. Soc. Bot. Genève ser. 2, 5: 224. 1913. *Filago dasycarpa* Grisebach, Abh. Königl. Ges. Wiss. Göttingen 24: 185. 1879. TYPE: Uruguay. Concepción del Uruguay, Oct. 1877, *P. Lorentz 1181* (holotype, GOET not seen; isotypes, G-BOIS not seen, NY).

Of his North American collection (cited below), Barneby (in litt. 9 Nov. 1988) wrote:

"The habitat in Texas is in low swampy ground, and one of the associated herbs is *Mimosa strigillosa* T. & G. The latter has a remarkable bicentric dispersal, around the Gulf of Mexico in US, and in warm-temperate South America chiefly in the Paraná basin. There is no obvious reason to think that the mimosa is not native in both hemispheres—there are a number of xerophytic species with about the same range—and the possibility arises that *Micropsis* is not just a casual introduction but an overlooked native in Texas. The microhabitat where I found it was certainly not pristine Gulf lowland prairie, but that scarcely exists nowadays."

I agree with Barneby that *Micropsis dasycarpa* could be native to Texas. Although its recent discovery in a part of the world relatively well-explored by botanists, and the apparent lack of further collections from the area, would argue against that interpretation for now, the species will be given benefit of the doubt and treated as introduced for the *Flora of North America* project.

North American specimen examined. U.S.A. **Texas:** Victoria Co., N of Inez, colonial in drying mud at edge of

pool, in Gulf Coast Prairie, 18 May 1987, *R. C. Barneby 18201* (NY 622020, RSA 475037).

South American specimens examined. PARAGUAY. Villa Florida, 2 Oct. 1892, *O. Kuntze s.n.* (NY); Cerros de Tobaty, Sep. 1900, *E. Hassler 6102* (NY[2]). URUGUAY. Departamento de Colonia, Riachuelo, 1 Nov. 1960, *A. L. Cabrera 18201* (RSA).

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