

RENOVATION OF *DYSSODIA* (COMPOSITAE: TAGETEAE)

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ABSTRACT

Reconsideration of circumscription of *Dyssodia* s.l. has led to resurrection of *Adenophyllum*, *Boeberastrum*, *Comaclinium*, *Dysodiopsis*, and *Thymophylla* and to change to generic rank for one section: **Boeberoides** (DC.) Strother with one species, **B. grandiflora**. New combinations in *Adenophyllum* are: *A. anomalum*, *A. appendiculatum*, *A. aurantium*, *A. cooperi*, *A. glandulosum*, *A. porophylloides*, *A. porophyllum* var. *cancellatum*, *A. porophyllum* var. *radiatum*, *A. speciosum*, *A. squamosum*, and *A. wrightii* var. *pulcherrimum*; in *Comaclinium*: *C. montanum*; and in *Thymophylla*: *T. acerosa*, *T. aurea* var. *polychaeta*, *T. concinna*, *T. gentryi*, *T. gypsophila*, *T. micropoides*, *T. mutica*, *T. pentachaeta* var. *belenidium*, *T. pentachaeta* var. *hartwegii*, *T. pentachaeta* var. *puberula*, *T. setifolia* var. *radiata*, *T. tenuiloba* var. *texana*, *T. tenuiloba* var. *treculii*, *T. tenuiloba* var. *wrightii*, and *T. tephroleuca*.

In a review of Tageteae (Strother 1977), I acknowledged that my earlier (Strother 1969) circumscription of *Dyssodia* was too broadly drawn and that the subgenera and some sections would be better treated as distinct genera, because some of the subdivisions are more closely allied with other Tageteae than with each other. Those conclusions were drawn from integration of new and re-evaluated, old observations of morphology and chromosome numbers both within *Dyssodia* s.l. and across Tageteae. The desirability of such a reinterpretation of *Dyssodia* (sensu Strother 1969) has been indicated, at least implicitly, by Robinson (1981) and Downum et al. (1985).

The resulting realignments require several nomenclatural changes, which are set forth here. The format is intended to coordinate with my 1969 treatment and to account for the one name added to *Dyssodia* in the interval. Circumscriptions of species and varieties are unchanged except that of *D. decipiens*, which is expanded to include *D. sanguinea*. In the following synopses of genera and in the nomenclator for *Dyssodia*, accepted names are in capitals (for previously published) or boldface (new combinations); for all, basionyms are indicated.

Review of revised phyletic postulates for relationships among genera of Tageteae is beyond the scope of this paper. Nevertheless, some of the more

salient differences that form the bases for recognition of the retained, resurrected, and newly recognized genera may be summarized in the following key:

- a. Phyllaries free quite to base or nearly so.
 - b. Erect annuals and perennial herbs; leaves not fleshy; calyculus of 3–5(1–12) bracteoles.
 - c. Leaves pinnatifid with 3–17 linear to lance-cuneate or oblanceolate lobes, glands scattered in lamina and/or submarginal; receptacles fimbriate or finely setose; lobes of disc corollas short, deltate to lance-deltate. *Dyssodia*
 - c. Leaves simple or trifoliate, glands mostly in rows between lateral nerves; receptacles minutely paleate; lobes of disc corollas lance-linear to subulate. *Comaclinium*
 - b. Sprawling or decumbent annuals; leaves fleshy; calyculus none or a single bracteole. *Boeberastrum*
- a. Phyllaries weakly to strongly connate.
 - d. Leaves mostly pinnate or pinnatifid, if simple, then lanceolate, linear, or filiform; calyculus of deltate, linear, subulate, or pectinate bracteoles; some or all phyllaries gland-bearing.
 - e. Plants less than 3 dm high; leaves linear-filiform or pinnatifid with linear-filiform lobes; phyllaries strongly connate $2/3 +$ their length, margins of the outer seldom free more than $1/2$ their length; receptacles naked or nearly so. *Thymophylla*
 - e. Plants (2–)4–20+ dm high; leaves or lobes linear or broader; phyllaries weakly connate $1/3 - 2/3$ their length (somewhat more in *Dysodiopsis*), often separating in age, margins of the outer usually free to base; receptacles fimbriate or setose.
 - f. Leaves mostly pinnate or pinnatifid, if simple, then lanceolate, glands marginal and subterminal; lobes of disc corollas lance-linear to subulate; style-branch tips papillate and conic or hispidulous and subulate. *Adenophyllum*
 - f. Leaves linear, glands scattered along either side of midvein; lobes of disc corollas lance-deltate; style-branch tips papillate, abruptly truncate and with a fine, setaceous appendage. *Dysodiopsis*
 - d. Leaves simple, oblong to lance-ovate; calyculus of broadly lanceolate bracteoles; phyllaries glandless. *Boeberoides*

SYNOPSIS OF GENERA

ADENOPHYLLUM Pers., Synop. Pl. 458. 1807. $\equiv$ *Dyssodia* Cav. sect. *Adenophyllum* (Pers.) O. Hoffm. in Engl. & Prantl, Naturl. Pflanz. 4(5):266. 1894.—TYPE: *Adenophyllum coccineum* Pers. $\equiv$ *Willdenowa glandulosa* Cav. $\equiv$ **ADENOPHYLLUM GLANDULOSUM** (Cav.) Strother.

Willdenowa Cav., Icon. Pl. 1:61, t. 89. 1791, non *Willdenowia* Thunb. 1788, nec *Willdenowa* Cothenius 1790.—TYPE: *Willdenowa glandulosa* Cav. $\equiv$ **ADENOPHYLLUM GLANDULOSUM** (Cav.) Strother.

Schlechtendalia Willd., Sp. Pl. 3:2125. 1804, nom. rej. vs. *Schlechtendalia* Less., 1830.—TYPE: *Willdenowa glandulosa* Cav. $\equiv$ **ADENOPHYLLUM GLANDULOSUM** (Cav.) Strother.

- Clomenocoma* Cass., Dict. Sci. Nat. 9:416. 1817. $\equiv$ *Dyssodia* Cav. subg. *Clomenocoma* (Cass.) Strother, Univ. Calif. Publ. Bot. 48:37. 1969. $\equiv$ *Dyssodia* Cav. sect. *Clomenocoma* (Cass.) Strother, Univ. Calif. Publ. Bot. 48:49. 1969.—TYPE: *Aster aurantius* L. $\equiv$ *Clomenocoma aurantia* (L.) Cass. $\equiv$ *ADENOPHYLLUM AURANTIUM* (L.) Strother.
- Lebetina* Cass., Dict. Sci. Nat. 25:395. 1822. $\equiv$ *Dyssodia* Cav. sect. *Lebetina* (Cass.) O. Hoffm. in Engl. & Prantl, Naturl. Pflanz. 4(5):266. 1894.—TYPE: *Lebetina cancellata* Cass. $\equiv$ *ADENOPHYLLUM POROPHYLLUM* (Cav.) Hemsley var. *CANCELLATUM* (Cass.) Strother.
- Trichaetolepis* Rydb., N. Amer. Fl. 34:170. 1915.—TYPE: *Trichaetolepis wrightii* (A. Gray) Rydb. $\equiv$ *ADENOPHYLLUM WRIGHTII* A. Gray.

Annual or perennial herbs and shrubs, most robust or coarse, (2–) 10–20+ dm high; leaves opposite or alternate, pinnate with lanceolate or ovate leaflets or pinnatifid with obovate, linear, or filiform lobes, bases, rachises, and teeth usually setose or bristly, glands marginal, often associated with bases of lobes, and subterminal in lobe tips; calyculus of 12–16(1–22, sometimes wanting in *A. anomalum*), subulate, lance-linear, or pectinate, often seta-tipped bracteoles, often equalling or surpassing the phyllaries; involucre 8–20(3.5–25) mm high; phyllaries 8–20(–30), weakly connate $1/3$ – $2/3$ their length, often separating with age, margins of the outer usually free to base or nearly so, glands round to elliptic or elongate; receptacles fimbriate or setose; ray corollas golden yellow, orange, or scarlet; lobes of disc corollas lance-linear to subulate; style-branch tips papillate and conic or hispidulous and subulate; achenes stoutly to narrowly obpyramidal; pappus of (8–)15–20 squamellae, variously muticous, aristate, or dissected into 4–11 bristles; $x = 7, 13$.

BOEBERASTRUM (A. Gray) Rydb., N. Amer. Fl. 34:161. 1916. $\equiv$ *Dyssodia* Cav. sect. *Boeberastrum* A. Gray, Proc. Amer. Acad. Arts 19:39. 1883.—TYPE: *Dyssodia anthemidifolia* Benth. $\equiv$ *BOEBERASTRUM ANTHEMIDIFOLIUM* (Benth.) Rydb.

Sprawling annuals with stems to 3 dm long; leaves at first opposite, soon alternate, the blades fleshy, spatulate or pinnatifid with linear lobes, not setaceous at base, on lobes, or at tips, glands submarginal or scattered in lamina; calyculus none or a single bracteole; involucre 5–8 mm high; phyllaries 8, free to base, glands mostly round; receptacles fimbriate; ray corollas bright yellow; lobes of disc corollas narrowly lance-linear to subulate; style-branch tips papillate, rounded-truncate; achenes stoutly obconical or obscurely obpyramidal; pappus of 16–20 squamellae, each scale dissected into 5–10 bristles; $x = 7$.

Boeberoides (DC.) Strother, stat. nov. $\equiv$ *Dyssodia* Cav. sect. *Boeberoides* DC., Prodr. 5:640. 1836.—TYPE: *Dyssodia grandiflora* DC. $\equiv$ *BOEBEROIDES GRANDIFLORA* (DC.) Strother.

Coarse herbs (annual?) to 25 dm high; leaves all opposite or subopposite, blades oblong to lance-ovate, often with 2–6 inconspicuous subulate lobules at base, glands scattered in lamina; calyculus of 10–20 broadly lanceolate bractlets; involucre ca 20 mm high; phyllaries 18–20, strongly connate ca $\frac{2}{3}$ + their length, glandless; receptacles foveolate; ray corollas yellow-orange; lobes of disc corollas lance-linear; style-branch tips hispidulous, long-subulate; achenes obpyramidal; pappus of ca 20 squamellae, each scale dissected into 7–10 bristles; $x = ?$

COMACLINIUM Scheidw. & Planchon, Fl. Ser. Jard. l'Europe 8:19, t. 756.

1852.—TYPE: *Comaclinium aurantiacum* Scheidw. & Planchon. $\equiv$ COMACLINIUM MONTANUM (Benth.) Strother.

Perennial herbs to 10 dm high; leaves opposite, becoming alternate, the blades simple (–trifoliate), lanceolate, usually with 1–3 pairs of subulate-setose lobules at base, glands mostly in rows between lateral nerves; calyculus of 3–12 linear bracteoles; involucre 12–15 mm high; phyllaries 10–16, free to base or nearly so, streaked with linear to elliptic glands; receptacles minutely paleate; ray corollas orange; lobes of disc corollas lance-linear to subulate; style-branch tips papillate, conic; achenes stoutly obpyramidal; pappus of ca 20 squamellae, the outer shorter, all dissected into 5–10 bristles; $x = ?$

DYSODIOPSIS (A. Gray) Rydb., N. Amer. Fl. 34:171. 1915. $\equiv$ *Hymenatherum*

Cass. sect. *Dysodiopsis* A. Gray, Smithsonian Contr. Knowl. 3(5):116 (Pl. Wright.

1). 1852. —TYPE: *Dyssodia tagetoides* Torrey & A. Gray. $\equiv$ DYSODIOPSIS TAGETOIDES (Torrey & A. Gray) Rydb.

Annuals or short-lived perennials, 4–8+ dm high; leaves opposite at base, alternate above, blades linear, coarsely toothed, obscurely setaceous at base, glands scattered along either side of midvein; calyculus of 5–8, conspicuous, subulate or pinnatisect bracteoles nearly as long as phyllaries; involucre 9–12 mm high; phyllaries 10–12, strongly connate but with outer margins free to base, glands round to elliptic; receptacles minutely fimbriate; ray corollas lemony to greenish yellow; lobes of disc corollas lance-deltate (not short-deltate); style-branch tips papillate, truncate, and with a fine, fragile, setaceous appendage; achenes narrowly obpyramidal; pappus 10–12 unequal, lanceolate scales ending in 1(–3) aristae; $x = 13$.

DYSSODIA Cav., Descr. Pl. 202. 1802.—TYPE: *Tagetes papposa* Vent. = DYSSODIA PAPPOSA (Vent.) Hitchc.

Boebera Willd., Sp. Pl. 2125. 1804.—TYPE: *Boebera chrysanthemoides* Willd. $\equiv$ *Tagetes papposa* Vent. $\equiv$ DYSSODIA PAPPOSA (Vent.) Hitchc.

Rosilla Less., Synop. Gen. Comp. 245. 1832.—TYPE: *Rosilla lutea* Less. = DYSSODIA PINNATA (Cav.) Robinson.

Syncephalanthia Bartling, Ind. Sem. Hort. Goett. 6. 1836 [ex Linnaea 12:80. 1838].
 ≡ *Dyssodia* Cav. sect. *Syncephalanthia* (Bartling) Strother—TYPE: *Syncephalanthia*
decipiens Bartling. ≡ *DYSSODIA DECIPIENS* (Bartling) M. Johnston in M. Johnston &
 B. Turner.

Annuals or perennial herbs 1–3(–9) dm high; leaves opposite, often becoming alternate distally, the blades pinnatisect with linear to linear-cuneate or oblanceolate lobes, little, if at all, setaceous at base, on teeth, or at tips of lobes, glands scattered in lamina and/or submarginal; calyculus of 3–5(1–9) deltate to linear bracteoles 1/2–1 times as long as phyllaries; involucre 5–8(–10) mm high; phyllaries 4–8(–16), free to base or nearly so, glands round to elliptic; receptacles fimbriate to finely setose; ray corollas yellow to yellow-orange; lobes of disc corollas short, deltate to lance-deltate; style-branch tips papillate, rounded-truncate to shortly deltate; achenes stoutly obpyramidal to obconic; pappus of 15–20 unequal to subequal squamellae, each scale dissected into 5–10 bristles; $x = 13$.

THYMOPHYLLA Lagasca, Gen. Sp. Nov. 25. 1816. ≡ *Dyssodia* Cav. sect. *Thymophylla* (Lagasca) O. Hoffm. in Engl. & Prantl, Nat. Pflanz. 4(5):266. 1894.—TYPE: *THYMOPHYLLA SETIFOLIA* Lagasca.

Hymenatherum Cass., Bull. Soc. Philom. Paris 1818:183. 1818. ≡ *Dyssodia* Cav. subg. *Hymenatherum* (Cass.) Strother, Univ. Calif. Publ. Bot. 48:57. 1969. ≡ *Dyssodia* Cav. sect. *Hymenatherum* (Cass.) Strother, Univ. Calif. Publ. Bot. 48:78. 1969.—TYPE: *Hymenatherum tenuifolium* Cass. ≡ *THYMOPHYLLA TENUIFOLIA* (Cass.) Rydb.

Dyssodia Cav. sect. *Aciphyllaea* DC., Prodr. 5:641. 1836. ≡ *Aciphyllaea* (DC.) A. Gray, Mem. Amer. Acad. Arts, ser. 2. 4:9. 1849. ≡ *Hymenatherum* Cass. sect. *Aciphyllaea* (DC.) A. Gray, Smithsonian Contr. Knowl. 3(5):115 (Pl. Wright. I). 1852.—TYPE: *Dyssodia acerosa* DC. ≡ *THYMOPHYLLA ACEROSA* (DC.) Strother.

Gnaphalopsis DC., Prodr. 7:258. 1838. ≡ *Hymenatherum* Cass. sect. *Gnaphalopsis* (DC.) A. Gray, Smithsonian Contr. Knowl. 3(5):116 (Pl. Wright. I). 1852. ≡ *Dyssodia* Cav. sect. *Gnaphalopsis* (DC.) Strother, Univ. Calif. Publ. Bot. 48:57. 1969.—TYPE: *Gnaphalopsis micropoides* DC. ≡ *THYMOPHYLLA MICROPOIDES* (DC.) Strother.

Lowellia A. Gray, Mem. Amer. Acad. Arts, ser. 2. 4:89. 1849.—TYPE: *Lowellia aurea* A. Gray. ≡ *THYMOPHYLLA AUREA* (A. Gray) E. Greene in Britton & A. Brown.

Hymenatherum Cass. sect. *Heterochromeia* A. Gray, Synop. Fl. N. Amer. 1(2):453. 1884.—TYPE: *Hymenatherum concinnum* A. Gray. ≡ *THYMOPHYLLA CONCINNA* (A. Gray) Strother.

Dyssodia Cav. sect. *Aurantiacae* Strother, Univ. Calif. Publ. Bot. 48:64. 1969.—TYPE: *Hymenatherum aurantiacum* Brandege. ≡ *THYMOPHYLLA AURANTIACA* (Brandege) Rydb.

Annual or perennial herbs or shrublets less than 3 dm high; leaves opposite or alternate, the blades linear-filiform (narrowly spatulate in *T. micropo-*

ides) or pinnatisect with linear-filiform lobes, little, if at all, setaceous at base, on teeth, or at tips of lobes, glands scattered along rachis and lobes (submarginal and scattered in lamina of *T. micropoides*); calyculus of 1–3(0–8), deltate to subulate bracteoles, usually much shorter than the phyllaries; involucre 3–7 mm high; phyllaries 8–13(–22), strongly connate $2/3 +$ their length, seldom with outer margins free more than $1/2$ their length, glands mostly round; receptacles naked or nearly so; ray corollas golden to pale yellow (white in *T. concinnum*); lobes of disc corollas short, deltate to lance-deltate; style-branch tips papillate, deltate or conic; achenes stoutly to narrowly obconic, obpyramidal, or cylindric; pappus of 10(–20) squamellae, variously muticous, aristate, or dissected into 5–7 bristles; $x = 8$ [reports of $n =$ ca 13, 13, ca 26 in species of *Thymophylla* (as *Dyssodia*, e.g., in Strother, 1969) probably represent misinterpretations of triploid ($2n = 24$) and hexaploid ($2n = 48$) individuals].

NOMENCLATOR FOR DYSSODIA S.L.

- D. acerosa* DC., Prodr. 5:641. 1836. $\equiv$ *Thymophylla acerosa* (DC.) Strother, comb. nov.
D. anomala (Canby & Rose) Robinson. $\equiv$ *Hymenatherum anomalum* Canby & Rose, Contr. U.S. Natl. Herb. 1:105. 1891. $\equiv$ *Adenophyllum anomalum* (Canby & Rose) Strother, comb. nov.
D. anthemidifolia Benth., Bot. Voy. Sulphur 29. 1844. $\equiv$ *BOEBERASTRUM ANTHEMIDI-FOLIUM* (Benth.) Rydb., N. Amer. Fl. 34:162. 1915.
D. appendiculata Lagasca, Gen. Sp. Nov. 28. 1816. $\equiv$ *Adenophyllum appendiculatum* (Lagasca) Strother, comb. nov.
D. aurantia (L.) Robinson. $\equiv$ *Aster aurantius* L., Sp. Pl. 877. 1753. $\equiv$ *Adenophyllum aurantium* (L.) Strother, comb. nov.
D. aurantiaca (Brandege) Robinson. $\equiv$ *Hymenatherum aurantiacum* Brandege, Zoe 5:258. 1908. $\equiv$ *THYMOPHYLLA AURANTIACA* (Brandege) Rydb., N. Amer. Fl. 34:175. 1915.
D. aurea (A. Gray) Nelson. $\equiv$ *Lowellia aurea* A. Gray, Mem. Amer. Acad. Arts, ser. 2. 4:91. 1849. $\equiv$ *THYMOPHYLLA AUREA* (A. Gray) E. Greene in Britton & A. Brown, Illust. Fl. 3:435. 1898.
D. aurea (A. Gray) Nelson var. *polychaeta* (A. Gray) M. Johnston. $\equiv$ *Hymenatherum polychaetum* A. Gray, Smithsonian Contr. Knowl. 3(5):116 (Pl. Wright. I). 1852. $\equiv$ *Thymophylla aurea* (A. Gray) E. Greene var. *polychaeta* (A. Gray) Strother, comb. nov.
D. concinna (A. Gray) Robinson. $\equiv$ *Hymenatherum concinnum* A. Gray, Synop. Fl. N. Amer. 1(2):453. 1886. $\equiv$ *Thymophylla concinna* (A. Gray) Strother, comb. nov.
D. cooperi A. Gray, Proc. Amer. Acad. Arts 9:201. 1874. $\equiv$ *Adenophyllum cooperi* (A. Gray) Strother, comb. nov.
D. DECIPIENS (Bartling) M. Johnston in M. Johnston & B. Turner, Rhodora 64:13. 1962. $\equiv$ *Syncephalanthia decipiens* Bartling, Index Sem. Hort. Goett. 6. 1836. [ex Linnaea 12:80. 1838].
D. gentryi M., Johnston, Southw. Naturalist 3:219. 1959. $\equiv$ *Thymophylla gentryi* (M. Johnston) Strother, comb. nov.
D. glandulosa (Cav.) O. Hoffm. in Engl. & Prantl, 1894 (non *Dyssodia glandulosa* Cav.,

- 1802). $\equiv$ *Willdenowia glandulosa* Cav., Icon. Pl. 1:61, t. 89. 1791. $\equiv$ *Adenophyllum glandulosum* (Cav.) Strother, comb. nov.
- D. grandiflora* DC., Prodr. 5:640. 1836. $\equiv$ *Boeberoides grandiflora* (DC.) Strother, comb. nov.
- D. gypsophila* B. Turner, Madroño 21:421. 1972. $\equiv$ *Thymophylla gypsophila* (B. Turner) Strother, comb. nov.
- D. littoralis* Brandegee, Zoe 5:163. 1903. $\equiv$ *BOEBERASTRUM LITTORALIS* (Brandegee) Rydb., N. Amer. Fl. 34:162. 1915.
- D. micropoides* (DC.) Loes. $\equiv$ *Gnaphalopsis micropoides* DC., Prodr. 7:258. 1838. $\equiv$ *Thymophylla micropoides* (DC.) Strother, comb. nov.
- D. montana* (Benth.) A. Gray. $\equiv$ *Clomenocoma montana* Benth., Pl. Hartweg. 86. 1841. $\equiv$ *Comaclinium montanum* (Benth.) Strother, comb. nov.
- D. mutica* M. Johnston, Southw. Naturalist 5:225. 1960. $\equiv$ *Thymophylla mutica* (M. Johnston) Strother, comb. nov.
- D. neomexicana* (A. Gray) Robinson. $\equiv$ *Hymenatherum neomexicanum* A. Gray. $\equiv$ *ADENOPHYLLUM WRIGHTII* A. Gray, Smithsonian Contr. Knowl. 5(6):92. (Pl. Wright. II). 1853, non *Dyssodia* (*Hymenatherum*) *wrightii* (A. Gray) Robinson, 1913.
- D. neomexicana* (A. Gray) Robinson var. *pulcherrima* Strother, Univ. Calif. Publ. Bot. 48:43. 1969. $\equiv$ *Adenophyllum wrightii* A. Gray var. *pulcherrimum* (Strother) Strother, comb. nov.
- D. PAPPOSA* (Vent.) A. Hitchc., Trans. Acad. Sci. St. Louis 5:503. 1891. $\equiv$ *Tagetes papposa* Vent., Descr. Pl. Nouv. Cels. 4th livr. 36. 1801.
- D. pentachaeta* (DC.) Robinson. $\equiv$ *Hymenatherum pentachaetum* DC., Prodr. 5:642. 1836. $\equiv$ *THYMOPHYLLA PENTACHAETA* (DC.) Small, Fl. Southeast. U.S. 1295. 1903.
- D. pentachaeta* (DC.) Robinson var. *belenidium* (DC.) Strother. $\equiv$ *Hymenatherum belenidium* DC., Prodr. 7:292. 1838. $\equiv$ *Thymophylla pentachaeta* (DC.) Small var. *belenidium* (DC.) Strother, comb. nov.
- D. pentachaeta* (DC.) Robinson var. *hartwegii* (A. Gray) Strother. $\equiv$ *Hymenatherum hartwegii* A. Gray, Smithsonian Contr. Knowl. 3(5):117 (Pl. Wright. I). 1852. $\equiv$ *Thymophylla pentachaeta* (DC.) Small var. *hartwegii* (A. Gray) Strother, comb. nov.
- D. pentachaeta* (DC.) Robinson var. *puberula* (Rydb.) Strother. $\equiv$ *Thymophylla puberula* Rydb., N. Amer. Fl. 34:177. 1915. $\equiv$ *Thymophylla pentachaeta* (DC.) Small var. *puberula* (Rydb.) Strother, comb. nov.
- D. PINNATA* (Cav.) Robinson, Proc. Amer. Acad. Arts 49:501. 1913. $\equiv$ *Aster pinnatus* Cav., Icon. Pl. 3:6. 1794.
- D. PINNATA* (Cav.) Robinson var. *GLABRESCENS* Strother, Univ. Calif. Publ. Bot. 48:33. 1969.
- D. porophylla* (sic) (Cav.) Cav. $\equiv$ *Pteronia porophyllum* Cav., Icon. Pl. 3:13., t. 225. 1794. $\equiv$ *ADENOPHYLLUM POROPHYLLUM* (Cav.) Hemsley, Biol. Cen. Amer. Bot. 2:218. 1881.
- D. porophylla* (Cav.) Cav. var. *cancellata* (Cass.) Strother. $\equiv$ *Lebetina cancellata* Cass., Dict. Sci. Nat. 25:395. 1822. $\equiv$ *Adenophyllum porophyllum* (Cav.) Hemsley var. *cancellatum* (Cass.) Strother, comb. nov.
- D. porophylla* (Cav.) Cav. var. *radiata* DC., Prodr. 5:639. 1836. $\equiv$ *Adenophyllum porophyllum* (Cav.) Hemsley var. *radiatum* (DC.) Strother, comb. nov.
- D. porophylloides* A. Gray, Mem. Amer. Acad. Arts, ser. 2. 5:322. 1854. $\equiv$ *Adenophyllum porophylloides* (A. Gray) Strother, comb. nov.
- D. sanguinea* (Klatt) Strother. $\equiv$ *Syncephalanthus sanguineus* Klatt, Leopoldina 25:106. 1889.

- = *DYSSODIA DECIPIENS* (Bartling) M. Johnston in M. Johnston & B. Turner.
D. setifolia (Lagasca) Robinson. ≡ *THYMOPHYLLA SETIFOLIA* Lagasca, Gen. Sp. Nov. 25. 1816.
D. setifolia (Lagasca) Robinson var. *radiata* (A. Gray) Strother. ≡ *Thymophylla greggii* A. Gray var. *radiata* A. Gray, Smithsonian Contr. Knowl. 3(5):119 (Pl. Wright. I). 1852. ≡ *Thymophylla setifolia* Lagasca var. *radiata* (A. Gray) Strother, comb. nov.
D. speciosa A. Gray, Proc. Amer. Acad. Arts 5:163. 1861. ≡ *Adenophyllum speciosum* (A. Gray) Strother, comb. nov.
D. squamosa A. Gray, Proc. Amer. Acad. Arts 19:38. 1883. ≡ *Adenophyllum squamosum* (A. Gray) Strother, comb. nov.
D. TAGETIFLORA Lagasca, Gen. Sp. Nov. 29. 1816.
D. tagetoides Torrey & A. Gray, Fl. N. Amer. 2:361. 1842. ≡ *DYSODIOPSIS TAGETOIDES* (Torrey & A. Gray) Rydb., N. Amer. Fl. 34:171. 1915.
D. tenuifolia (Cass.) Loes. ≡ *Hymenatherum tenuifolium* Cass., Bull. Soc. Phil. 1818:183. 1818. ≡ *THYMOPHYLLA TENUIFOLIA* (Cass.) Rydb., N. Amer. Fl. 34:173. 1915.
D. tenuiloba (DC.) Robinson. ≡ *Hymenatherum tenuilobum* DC., Prodr. 5:462. 1836. ≡ *THYMOPHYLLA TENUILOBA* (DC.) Small, Fl. Southeast. U.S. 1295. 1903.
D. tenuiloba (DC.) Robinson var. *texana* (Cory) Strother. ≡ *Dyssodia texana* Cory, Rhodora 49:162. 1947. ≡ *Thymophylla tenuiloba* (DC.) Small var. *texana* (Cory) Strother, comb. nov.
D. tenuiloba (DC.) Robinson var. *treculii* (A. Gray) Strother. ≡ *Hymenatherum treculii* A. Gray, Proc. Amer. Acad. Arts 19:42. 1883. ≡ *Thymophylla tenuiloba* (DC.) Small var. *treculii* (A. Gray) Strother, comb. nov.
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