

under grain shocks during the threshing season.

Dr. Ira E. Nash of Dallas, a veteran rattlesnake collector, took from near Cedar Hill two enormous specimens measuring 85 and 92 inches, respectively.

During the winter months the rattlesnakes congregate among crevices on rocky hillsides. As a rule, however, large numbers do not assemble in single locations as they do in the north; they disperse over a larger area.

29. *Crotalus horridus atricaudatus* Latreille. Cane-Brake Rattlesnake. Rare. The "velvet-tail rattler" is found along creeks in the hills of the southwestern part of the county and in the lowlands along the Trinity River in the southeastern part.

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Nomenclature of Species of Dandelion and Goats- Beard (*Taraxacum* and *Tragopogon*) Introduced into Texas

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TARAXACUM OFFICINALE Wiggers, Primitiae Florae Hol-saticae, p. 56. 1780. The generic name is a *nomen conservandum* (International Rules of Botanical Nomenclature, ed. John Briquet, p. 111, 1935; also Brittonia 6: 93, 1947). Following are the principal direct synonyms applied to the common dandelion. The three references listed as not seen are taken from the synonymy given by Fernald (1933, p. 380).

Leontodon Taraxacum L., Sp. Pl. (ed. 1), p. 798. 1753. "*Habitat in Europae pascuis.*"

Hedypnotis Taraxacum (L.) Scopoli, Flora Carniolica (ed. 2) 2:99. 1772.

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- Leontodon vulgare* Lam., Flore Française 2: 113. 1778. Based on *Leontodon Taraxacum* L.
- Taraxacum officinale* Wiggers, Primitiae Florae Holsaticae, p. 56. 1780. Based on *Leontodon Taraxacum* L.
- Taraxacum vulgare* Schrank, Baiersche Reise, p. 11. 1786. Based on *Leontodon Taraxacum* L., not on *L. vulgare* Lam.
- Leontodon officinalis* (Wiggers) Withering, Botanical Arrangement of All the Vegetables Naturally Growing in Great Britain (ed. 3) 3: 679. 1796. (Not examined. Cited by Fernald as "Arr. Brit. Pl.")
- Taraxacum dens-leonis* Desf., Flora Atlantica 2: 228. 1799. Based on "Leontodon calyce inferne reflexo, etc.," of Linnaeus (i. e., *Leontodon Taraxacum*).
- Leontodon Taraxacum d. vulgare* (Lam.) Bentham, Catalogue des Plantes Indigènes des Pyrénées et du Bas Languedoc, p. 94. 1826. (Not examined.)*
- Leontodon Taraxacum* ssp. *officinalis* Gaudin, Flora Helvetica 5: 61. 1829. Based on "*Leontodon Taraxacum* Willd."
- Taraxacum officinale* var. *genuinum* Koch, Synopsis der Flora von Deutschland und der Schweiz (ed. 2) 2: 492. 1844.
- Taraxacum dens-leonis* var. *officinale* (Wiggers) Cosson & Germain, Flore des Environs de Paris 2: 432. 1845. (Not examined.)
- Taraxacum officinale* var. *a. pratense* Neilreich, Flora von Nieder-Oesterreich, pp. 411-412. 1859.
- Taraxacum Taraxacum* (L.) Karsten, Deutsche Flora, p. 1138. 1883. (Also published as new by Macmillan, Bull. Torr. Bot. Club 18: 15. 1892.)
- Taraxacum Taraxacum* var. *a. genuinum* Karsten, Deutsche Flora, p. 1138. 1883.
- Taraxacum officinale* var. *a. typicum* Fiori, Flora Analitica d'Italia 3: 414, 1904.
- Taraxacum dens-leonis* var. *a. commune* Rouy in Rouy, Foucaud & Camus, Flore de France 9: 188. 1905.
- Taraxacum officinale* ssp. *vulgaris* (Lam.) Schinz & Keller, Flora der Schweiz (ed. 3) 2: 359. 1914. (Ambiguously listed in ed. 2, 2: 229, 1905, as "*T. officinale* Weber Ssp. *T. vulgare* (Lam.) Schrank.")
- Taraxacum palustre* var. *vulgare* (Lam.) Fernald, Rhodora 35: 380. 1933.

The earliest specific epithet, that of Linnaeus, is invalidated under the genus *Taraxacum* by the provision of the International Rules outlawing duplicate binomials. Some recent authors have incorrectly used the binomial "*Taraxacum vulgare* (Lam.) Schrank," as if it were a transfer of Lamarck's *Leontodon vulgare*, the second earliest specific epithet. But Schrank is publishing *Taraxacum vulgare* based it solely on *Leontodon Taraxacum* Linnaeus, without referring to Lamarck. As an avowedly entirely new name, it was invalid because six years later than *T. officinale* Wiggers. As a new and independent name, it furthermore prevents the transfer of Lamarck's epithet to *Taraxacum*. More important still, since Lamarck's name was an illegitimate renaming of *Leontodon Taraxacum* L., his epithet is not valid in

*EDITOR'S NOTE: Since our type-font lacks Greek letters, we have been obliged, in the synonymy, to substitute Italic *a*, *b*, *c*, and *d* for the Greek letters alpha, beta, gamma and delta of Dr. Shinner's manuscript.

any other combination in specific rank if another name is available (already pointed out by Fernald, 1948). *Taraxacum officinale* Wiggers remains the earliest available name of the common dandelion. The name *Taraxacum palustre* var. *vulgare* (Lam.) Fernald (as its author later surreptitiously confessed; *Rhodora* 47: 243, 1945) resulted from the erroneous identification of an introduced northeastern variation of common dandelion with a different species of Europe.

In the introduction to Wiggers' *Flora*, the author remarks, "Nomina pleraque Linnaeana sunt, reliqua celeberrimi Praeceptoris Weberi, ex scriptis et praelectionibus eiusdem collecta, aut aliorum auctorum, quos suo quemque loco nominatis invenies." The first part of the sentence ("The names are mostly Linnaean, the others are of the most celebrated teacher Weber, collected from his writings and lectures") has led many authors to assume that the new species should be attributed to Weber rather than to Wiggers. Pritzel, in his *Thesaurus Literaturae Botanicae*, goes so far as to assert that the flora was actually by Weber, and that Wiggers merely edited it. But the latter part of the sentence ("of Weber, or of other authors, each of whom you will find named in his place") does not suggest that such was the case. The text of the work supplies ample evidence that it was Wiggers' own. In a footnote on page 78 he states, "The reasons which persuade me not to retain the genus Mnium, but to assign its species to Hypnum, Bryum, and Polytrichum, see in WEB. *Spic. Praef.*" No less than sixteen footnotes refer to published or manuscript works of Weber, most of them like the preceding example giving support for Wiggers' statements, but one (page 8) noting a point of difference, and another (page 61) calling attention to disagreement between Weber and Stechman. Other footnotes refer to publications by Ray, "Schmiedel," Ehrhart, and Scopoli; one refers to another page in the *Flora* itself. Wiggers worded his introductory statement somewhat effusively, out of esteem for his teacher, Weber, but he quite plainly published the *Flora* as his own work. The correct author of its new genera and species is therefore Wiggers, not Weber.

TARAXACUM ERYTHROSPERMUM Andr. ex Besser, Enumeratio Plantarum Hucusque in Volhynia, Podolia, Gub. Kiiovensium, Bessarabia, Cis-Tyraica et circa Odessam Collectarum, p. 75. 1822. The original description follows:

"1586. *Taraxacum erythrospermum* Andr. T. cal. exteriore laxo, dimidio brevior; scapo unifloro, foliis runcinatis glabris, laciniis lanceolatis, rachique subulato-dentatis, seminibus rufis mihi. *T. dentis-leonis* in *Florae Lond. Fasc. V. ed. 2* sunt olivacei coloris aequae ac nostri. In Volhynia et Podolia frequens. Anthodio minus squarroso et seminibus rufis praecipue differt."

Below are the principal direct synonyms of this plant:

- Leontodon erythrospermum* (Andrz.) Eichwald, Naturhistorische Skizze von Litthauen, Volhynien und Podolien in geognostisch-mineralogischer, botanischer und zoologischer Hinsicht entworfen, p. 150. 1830. (Also published as new by Britton in Britton & Brown, Ill. Flora (ed. 2) 3: 316, 1913.)
- Taraxacum caucasicum* var. *erythrospermum* (Andrz.) Ledeb., Flora Rossica 2: 814. 1846.
- Taraxacum Taraxacum* var. *glaucescens* f. *erythrospermum* (Andrz.) Ascherson & Graebner, Flora des nordostdeutschen Flachlandes, p. 765. 1898.
- Taraxacum laevigatum* var. *erythrospermum* Andr. ex Hallier & Wohlfahrt in Koch, Synopsis der Deutscher und Schweizer Flora (ed. 3) 2: 1656. 1900.
- Taraxacum laevigatum* var. *normale* subvar. *erythrospermum* (Andrz.) Reut. ex Rouy in Rouy, Foucaud & Camus, Flore de France 9: 189. 1905.

At least twice, *T. erythrospermum* has been indicated to be a variety of *T. officinale*, but without being formally and correctly transferred under that species:

- "*Taraxacum officinale* (Wigg.) c. *T. erythrospermum* (DC.)," Babington, Manual of British Botany (ed. 1), p. 179. 1843.
- "*Taraxacum officinale* Weber Ssp. *T. laevigatum* (Willd.) DC. var. *erythrospermum* (Andrz.)," Schinz & Keller, Flora der Schweiz (ed. 2) 2: 229. 1905.

An earlier name in varietal rank is *T. erythrospermum* var. *bessarabicum* (Fisch.) DC., Prodr. 7: 147, 1838: "*b. Bessarabicum*, achaeniis etiam basi tuberculato-muricatis. — in Podolia, Bessarabia, Tauria, etc. *Leontodon Bessarabicus* Fitch. ex Link enum. 2. p. 283. *L. salinus* Bess. ! cont. 1. n. 990 non alior. (v.s.)"

Red-seeded dandelion is widespread in Texas, especially in the drier western half of the state, growing chiefly in lawns where artificially watered. It is much more frequent than the common species, from which it can be distinguished with certainty only by the brown-red mature seeds. Fernald (1933) and, following him, Deam (1940) distinguish the two by the presence of dorsal callosities near the apexes of the outer phyllaries in *T. erythrospermum*, but this is an inconstant and quite unreliable characteristic. Steyermark (1940) describes and figures red-seeded dandelion as hav-

ing phyllaries terminating in a small "spur," lacking in common dandelion. This difference I have been unable to observe; both species exhibit phyllary tips of a variety of shapes. Jones (1945) keys red-seeded dandelion as having smaller heads with fewer flowers. This is true for the average, but unfortunately stunted plants of *T. officinale* and large individuals of *T. erythrospermum* provide considerable overlap.

The nomenclatorial history of red-seeded dandelion has been even more intricate than that of common dandelion. Final decision as to its correct name must await a more careful taxonomic study than has yet been made of the plant and its allies in Europe. According to Handel-Mazzetti (1907), who has been followed by most recent authors, its correct name is *T. laevigatum* (Willd.) DC., Cat. Hort. Monsp., p. 149, 1813. This was based on *Leontodon laevigatum* Willd., Sp. Pl. (ed. 4) 3 pt. 3: 1546, 1803. Willdenow's description runs, in part, "L. calyce exteriori erecto adpresso, squamis ovatis; . . . *Habitat in Hispania. . . Squamae calycis exterioris ovatae adpressae.*" He contrasts it with *Leontodon lividus* Waldst. & Kit., under which species he lists *L. palustre* Smith, *L. salinum* Koch, *L. erectum* Hoffm., and *Hedypnois paludosa* Scop. as synonyms. As found in the United States, the red-seeded dandelion does not have erect or appressed phyllaries except as a result of accidents incidental to pressing herbarium specimens. Even in buds scarcely emergent from the crown of the plant, the phyllary tips are more or less loose and spreading, and very soon become widely so. Handel-Mazzetti (and, apparently following him, several later authors) describes *T. laevigatum* as having phyllaries either spreading or appressed, but I suspect this latitude is in large measure due to excessive dependence upon herbarium specimens. It is conceivable that the American plants represent one apomictic or parthenogenetic variant of a variable species, and that no great significance should be attached to their remarkably consistent behavior with respect to squarrose outer phyllaries (though the variation in phyllary tips and leaf shapes which does occur would not support such an assumption). Viewed from the standpoint of objective taxonomy, without reference to hypothetical possibilities, red-seeded dandelion is a recognized entity which does not fit the original description of *Leontodon laevigatus*, and which one would not bring

into closest comparison with the so-called swamp dandelion of Europe. It has greatest resemblance to common dandelion, and does fit the original description of *Taraxacum erythrospermum*. Handel-Mazzetti placed the latter species under *T. laevigatum* after examining the type of Willdenow's *Leontodon laevigatus*. Were his monograph an unimpeachably careful and thorough work, this might dispose of its identity. But the disagreement between the description of Willdenow and the plant assigned to his species arouse suspicion. A check of the bibliographic references in the lists of synonyms of *Taraxacum vulgare* and *T. laevigatum* given by Handel-Mazzetti showed approximately one in five to be incorrect; a similar experience has been recorded by Fernald (1933). Sherff (1920) commented, "Even this valuable monograph, however, was rather inadequate for a critical opinion of the North American species, since there were a number of the more recently proposed species of which he obviously had not seen authentic specimens. In certain other cases his examination of American specimens was too limited, and I fail to find even the slightest mention of some species proposed by American authors previous to 1907." Handel-Mazzetti's monograph was far better than some more recent European works with their bizarre proliferation of microforms masquerading as species, but even from a quite conservative standpoint, it is not above question. A definitive study of the indigenous races of *Taraxacum* in Europe, and especially of localized endemics to which the types of early-described species might belong, has yet to be made. Until then, it seems preferable to retain the appropriate name by which the red-seeded dandelion has been known in America for half a century (and for much longer in Europe), rather than take up an unfamiliar name of highly doubtful correctness.

TRAGOPOGON MAJOR Jacquin, *Florae Austriacae sive Plantarum Selectarum in Austriae Archiducatu Sponte Crescentium Icones* 1: 19-20, pl. 29. 1773. *T. dubius* ssp. *major* (Jacquin) Vollman (fide Hegi, *Illustrierte Flora von Mitteleuropa* VI/2: 1046, 1929).

Possibly careless following of the treatment in Hegi's *Illustrierte Flora*, retaining the species, but neglecting to add the subspecies, has been responsible for the name *Tragopogon dubius* Scop. becoming current in the United States for the now widespread *T. major* Jacq. Scopoli in describing

his species (*Flora Carniolica* (ed. 2) 2: 95, 1772) differentiated it from *T. pratensis* L. by several features, most of which serve equally well to separate it from *T. major*: "Differt a priori [*T. pratensis*] 1. Foliis planioribus, non undulatis, nec apice cirrhosis, neque basi ventricosis. 2. Ramis nullis. 3. Radio calycinis segmentis brevioribus. 4. Diametro corollae unciali." Certainly *T. major* differs from Scopoli's *T. dubius* in having leaves that are concave or almost clasping in the lower part, usually distinctly undulate, more or less curved (though not quite curled) at apex, and markedly expanded near base; and stems normally rather freely branching. The plant is now widely dispersed in North America, principally in the Great Plains region from the Texas Panhandle to Alberta (Groh, 1946; Shinnars, 1948), apparently preferring drier areas than *T. pratensis*. The latter species, with yellow flowers and slender peduncles, has not so far been found in Texas.

TRAGOPOGON PORRIFOLIUS L. A Composite posing no nomenclatorial or taxonomic difficulties is unusual enough to be worthy of note on that account alone. Salsify is occasionally found as a waif, chiefly in Trans-Pecos Texas, but rarely in waste ground as far east as Dallas. It greatly resembles *T. major* in the swollen peduncle and other vegetative features, differing most conspicuously in having purple instead of dingy lemon-yellow corollas.

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