

The Texas Species of *Euthamia* (Compositae)¹

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Prefacing his "A Study of *Euthamia*" (Pittonia 5: 72-80, 1902), E. L. Greene says, "Altogether at variance with *Solidago* in habit and sufficiently well marked by several characters; much more nearly at agreement, habitally, with *Gutierrezia*, but necessarily separate from that group by its capillary rather than chaffy pappus, the genus is as definitely circumscribed as either *Solidago* or *Gutierrezia*, and as certain to obtain future recognition as either of them." With these remarks I fully concur. In transferring *Aster Palmeri* to *Isocoma* (Field & Lab. 18: 27, 1950), I have previously noted that *Euthamia* forms a natural group with *Isocoma* as well as *Xanthocephalum* (including *Gutierrezia* in the latter genus), differing from both in possessing creeping rhizomes. The eighteen Texas collections of *Euthamia* at hand represent three species, distinguishable as follows:

Leaves 3-nerved, narrowly lanceolate, those of upper stem 3-7 mm. wide; involucre 4-5.5 mm. high; ligules 1-2 mm. long

Middle phyllaries elliptic-oblong, 1-1.2 mm. wide; involucre 3-3.5 mm. thick at equator during flowering; leaves densely resinous-punctate; Panhandle.....1. *E. camporum*

Middle phyllaries oblong or linear, 0.5-0.8 mm. wide; involucre 2-3 mm. thick at equator during flowering; leaves not or only sparsely and faintly resinous-punctate; east and southeast Texas

—2. *E. leptocephala*

Leaves 1-nerved, narrowly linear, those of upper stem 1-3 mm. wide; involucre 5.5-6 mm. high; ligules 2-4 mm. long....3. *E. pulverulenta*

1. *EUTHAMIA CAMPORUM* Greene, Pittonia 5: 74. 1902. "The best specimens were collected by myself along the Platte River at Sterling, Colorado, late in September, 1896. It occurs eastward in Kansas, and apparently even to North Dakota and Minnesota." Specimens have been seen from central Kansas and northwestern Oklahoma, and the following one from the Texas Panhandle. WHEELER Co.: south side of north fork of Red River, 3½ miles north of Shamrock, V. L. Cory 50254, Oct. 15, 1945. In Fernald's Eighth Edition of Gray's Manual (p. 1412, 1950), *Euthamia camporum* is listed as a synonym of *Solidago graminifolia* var. *media* (Greene) Harris, which is said to occur from "Minn. to Mo., e. to Wisc. and O.," a range excluding the type locality and most of the territory credited to the species by Greene. On the same page in the Manual, *Solidago gymnospermoides* (Greene) Fernald is said to occur from "Colo. to nw. Tex., e. to Wisc., Ill., Mo. and Ark.; Eastern Shore, Va." I believe that the name of Greene's *Euthamia gymnospermoides* has been mistakenly adopted for his *E. camporum*. *E. gymnospermoides*, from Sapulpa, Oklahoma (two other Oklahoma collections also cited), was described (Pittonia 5: 75-76) as "Allied to

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E. leptoccephala, ... leaves narrowly linear, acuminate, rather strongly punctate, 1-nerved ... heads as long as in *E. leptoccephala* but narrower." As indicated in the key above, *E. camporum* has heads markedly wider than those of *E. leptoccephala*, and 3-nerved leaves. A peculiar specimen from central Oklahoma (*Waterfall 7843*, bed of Canadian River west of Norman, Cleveland Co., Sept. 13, 1947), with linear-lanceolate, punctate leaves, pedicelled heads, and narrowly conical involucre (the same shape as in *E. leptoccephala*), may represent the true *E. gymnospermoides*. Greene did not state whether the heads were sessile or pedicelled. *E. gymnospermoides* may well be a restricted endemic of central Oklahoma, as it appeared when Greene described it. At any rate, plants referable to it have not been collected in Texas.

2. *EUTHAMIA LEPTOCEPHALA* (T.&G.) Greene, Mem. Torr. Bot. Club 5: 321. 1894. *Solidago leptoccephala* T.&G., Fl. N.A. 2: 226. 1842. "Western Louisiana, *Dr. Leavenworth! Dr. Hale! Texas, Drummond!*" This is the common *Euthamia* of eastern Texas, from the Red River to the Gulf, westward to Red River, Hunt, Freestone, Montgomery, and Aransas counties, flowering from late September to November.

3. *EUTHAMIA PULVERULENTA* Greene, Pittonia 5: 75. 1902. "It is known only from the vicinity of Hockley, [Harris Co.,] southeastern Texas, where it was collected in 1890 by Mr. F. W. Thurow." (TYPE in U.S. Nat. Herb.; fragments examined.) *Solidago texensis* Friesner, Butler Univ. Bot. Studies 4: 196. 1940. *S. gymnospermoides* var. *callosa* Harris, Rhodora 45: 413. 1943. (Both synonyms based on *Euthamia pulverulenta* Greene, not *Solidago pulverulenta* Nutt.) This species (rather unfortunately named, since it is usually not pulverulent) was long overlooked after its first description. It is not mentioned in Small's *Flora of the Southeastern United States*, nor in the Cory & Parks *Catalogue of the Flora of Texas*. It is apparently a restricted endemic of the central Gulf Coast of Texas. No specimens have been seen with the peculiar, rather inconspicuous pulverulence of the involucre and peduncles, other than the type collection. I believe, however, that this is a minor variation without taxonomic value. A similar situation exists in *Sisyrinchium*, in which *S. pruinosum* Bicknell is merely a rare pulverulent form of *S. amoenum* Bicknell (stunted plants of which were described as *S. Bushii* Bicknell). The following collections, with more or less viscid, non-pulverulent involucre, are otherwise perfectly characteristic *Euthamia pulverulenta*. GALVESTON Co.: Texas City, city limits, north side of town, *B. L. Turner 1728*, Nov. 25, 1949. JACKSON Co.: wet upland prairie above the Menehee flats south of Vanderbilt, *B. C. Tharp & Fred A. Barkley 13A151*, Nov. 26, 1943. (Distributed as *Aster Palmeri*, which it resembles in the herbarium.) SAN PATRICIO Co.: 2 miles east of Sinton, *Fred B. Jones 416*, Oct. 5, 1950. Three miles south of Ingleside, *Jones 447*, Nov. 5, 1950.