

association with Jones, and I gained as much from him as a student from an experienced and wise teacher. There is a deep feeling of gratitude on my part to the kindly old man who made our association possible and for us to become personal friends.

A New *Palafoxia* from the Edwards Plateau of Texas

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Early in October, 1923, shortly after going to the Ranch Experiment Station at Sonora, Texas (where the vegetation was unfamiliar to me), I accompanied the entomologist on a trip to a ranch between Rio Frio and the Sabinal. On the going trip we drove down the canyon of the West Fork of the Frio. We traveled after a flood, possibly of fifty feet or more of water, which erased all traces of the road, up-rooted trees, moved boulders, and made it something of an adventure to pick our way through and down the river. This trip was the first one I had taken, following a flood, and was an excellent introduction to my subsequent travels in southwest Texas. Somewhere on the way, probably in Real County, I saw a single plant of a composite bearing several heads of flowers whose corollas were white and light purple, appearing in bloom as an unusually attractive plant. I took it with me to learn its identity, but did not preserve the specimen. In Small's *Flora of the Southeastern United States*, the plant was located in the genus *Polypteris*; and in the key under the heading "annual; corolla throats obsolete or nearly so; heads homogamous; achenes much broadened upward, less than 6 mm. long." Two species were given under this division: "involucres 10-12-flowered, achenes less than 5 mm. long . . . *P. callosa*"; and "involucres 20-30-flowered, achenes over 5 mm. long . . . *P. texana*." Our plant in the number of flowers was *P. texana* and in the length of the achene was *P. callosa*. Apparently it was neither of these species, but (except in the number of flowers in the head) it was more nearly *callosa* than *texana*. As I was not

familiar with either of these species, it was tentatively labeled *P. callosa*. Subsequently twenty or more collections of this plant were made. Some of these were sent to eastern herbaria labeled *P. callosa*, and in each case the report came back that the plant was *P. texana*. As I had become familiar with *P. texana* by that time, I was quite certain that the latter determination was wrong; however, I was not familiar with *P. callosa*, even though I had collected it a few times in east Texas. On September 21, 1945, my number 49713 of *Palafoxia callosa* was collected in Dallas County, about eight miles north of Main Street in Dallas, along Coit Road, where the plant was frequent along a ditch in Austin chalk. The plant was strikingly distinct in appearance from the plant of the Edwards Plateau. The latter is so different from the two other species to which it has been referred in the past that to me it is unquestionably a distinct species. Since September, 1945, I have made six more collections of the new species. Two of these were made on October 22, 1945. The first, number 50465, was unusual in that the *Palafoxia* was the only plant growing on a pile of crushed limestone gravel (the pile was about ten feet long and four or five feet high) on the roadside eleven miles northwest of Sterling City, Sterling County. There were about fifty plants, all in bloom, and the display of flowers was very attractive to the eye. That afternoon number 50467 was collected in Tom Green County, 3 miles south of Christoval, where it was frequent along the highway. Because of its growth here under more normal conditions, this is selected as the type.

PALAFOXIA bella n.sp. Planta annua caulibus teretibus 2-4 mm. diam, 3.5-7.5 dm. alt. supra quartam partem inferiorem ramosis inferne subnitidis superne strigoso-hispidulis ad inflorescentiam glandulosis; foliis brevipetiolatis vel subsessilibus linearibus 2-6 cm. longis 1-3 mm. latis uninerviis in ambitu strigoso-hispidulis; involucris turbinatis 4-5 mm. altis et latis ca. 30-floribus; phyllariis ca. 12, lineari-ob lanceolatis strigoso-hispidulis apicem versus purpurascens; corollis versicoloris (albis et rosaceis vel pallide purpureis) tubo gracili 1-2 mm. longo, lobis linearibus ca. 4 mm. longis; achaeniis 3.5-4.5 mm. longis angulatis hirsutulis; pappi squamellis ca. 8 obovatis 0.7-0.9 mm. longis promin-

enter costatis costa brunnea triangulata anguste acuminata inclusa.

PALAFOXIA bella n.sp. Plant annual; stems stout, 3.5-7.5 dm. tall, 2-4 mm. in diameter, terete, shredded, somewhat shiny below, strigose-hispidulous above and becoming strongly glandular approaching the inflorescence, unbranched in the lower fourth or more, few- or several-branched above, the branches ascending; leaves short-petioled or sessile, linear, 2-6 cm. long, 1-3 mm. broad, 1-nerved, strigose-hispidulous on both surfaces; involucre turbinate, 4-5 mm. high and as broad; bracts about 12, linear-oblongate, strigose-hispidulous, the tips purplish; ray-flowers wanting; disk-flowers about 30 (32 in a selected head); corollas white in part and pink to light purple; throat obsolescent; tube slender, 1-2 mm. long, lobes linear, about 4 mm. long; achenes 3.5-4.5 mm. long, angular, hirsutulous; squamellae about 8, obovate, 0.7-0.9 mm. long, strongly 1-ribbed, the costa rather dark brown, narrowly triangular, acuminate, included.

Type: 3 miles south of Christoval, Tom Green County, Texas, *V. L. Cory 50467*, Oct. 22, 1945 (in Herb. Southern Methodist University). Some additional specimens examined:

TEXAS. Kerr Co.: Turtle Creek, $13\frac{3}{4}$ miles west of Kerrville, *Cory 52417*, Sept. 29, 1946 (SMU); east side of Johnson Creek at Ingram, *Cory 50536*, Oct. 27, 1945 (SMU). Schleicher Co.: $9\frac{1}{2}$ miles north of Eldorado, *Cory 52513*, Oct. 7, 1946 (SMU). Sterling Co.: 11 miles northwest of Sterling City, *Cory 50465*, Oct. 21, 1945 (SMU). Tom Green Co.: South Concho River $1\frac{1}{2}$ miles north of Christoval, *Cory 52517*, Oct. 7, 1946 (SMU).

None of my other collections is at hand, but I do not recall ever having seen this species in the same locality with other species of *Palafoxia*. In areas grazed by sheep and goats, *P. bella* is absent, hence it is not commonly seen. This probably happens along water courses emerging from the Edwards Plateau, extending the growth of *P. bella* into the area of distribution of *P. texana*. The latter species is primarily a plant of the Rio Grande Plain. *P. callosa* is

plentiful on chalk outcrops in the Blackland Prairie region of central Texas.

In the field the most marked difference between *P. bella* and the two other species mentioned is indicated by the specific name. The flowers in *P. callosa* are flesh-colored or light lavender-pink to white, and in *P. texana* are lavender. It has thrice as many flowers per head as does *P. callosa*, averaging almost as many as in *P. texana*. The pappus scales in *P. bella* are $\frac{1}{4}$ to $\frac{1}{3}$ as long as in *P. texana*, in which the costa is light brown and more prominent; the costa in *P. callosa* is oblong, blunt, and very dark or almost black.

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