

diate populations may be found in the field where this geographical overlap occurs.

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Physostegia serotina (Labiatae), a New Species from Coastal Louisiana and Texas

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PHYSOSTEGIA serotina Shinnery, sp. nov. Perennis arrhizomatosa caule glabro 35-125 cm. alto, foliis inferioribus breviter petiolatis (petiolis 0.3-1.5 cm. longis) laminis lanceolatis 3-7 cm. longis 0.5-1.3 cm. latis acutis acute serratis, superioribus gradatim multo minoribus lineari-lanceolatis sessilibus. Inflorescentia simplex vel virgato-ramosa, cum bracteis calycibusque densissime minute pubescens eglandulosa vel parce capitato-glandulosa. Calyces 7-9 (denique 10) mm. longi, dentibus anguste deltoideo-lanceolatis 2.0-3.3 cm. longis inclusis. Corollae spectabiles roseo-violeae maculatae 2.5-3.2 cm. longae (tubo 0.7-1.4 cm. longo e calyce denique valde exserto). Nuculi glabri, maturi desunt. LOUISIANA, CALCASIEU PARISH: clay ditch bank, east side of Lake Charles, *Shinnery 22108*, 9 October 1955 (TYPE). Additional specimens, both of injured plants with abnormal branching, seen from TEXAS, HARRIS Co.: 6½ miles southwest of Genoa, *V. L. Cory 50716*, November 11, 1945. JEFFERSON Co.: 9 miles west of Beaumont, *Cory 50021*, November 11, 1945. (Cited specimens all in Herb. Southern Methodist University.)

Closely related to *P. praemorsa* Shinnery (1951, pp. 166-167), a species still known only from the type collection, made over 250 airline miles north of the nearest locality known for the present species. *P. serotina* is a larger plant with larger, much deeper-colored corollas which have a more pronounced basal tube, the limb flaring well above the calyx when fully expanded. In *P. praemorsa* the pale corollas have a very short basal tube, expanded into the limb about at the summit of the calyx.

From 1943 until the present, no less than five species of *Physostegia* occurring in the Gulf Southwest (Arkansas, Louisiana, Oklahoma, Texas east of the Pecos River) have been described as new. In addition, three long-known species

are found in the region, making a total of eight. The following key summarizes the principal differences between them.

- 1a. Perennial with rhizomes or basal offsets, flowering July–November
 - 2a. Rhizomes present
 - 3a. Leaf blades elliptic, 2–3 times as long as wide; Val Verde Co., Texas (also Nuevo Leon, Mexico).....1. *P. Correllii* (Lundell) Shinners
 - 3b. Leaf blades lanceolate or oblong-lanceolate, 4–8 times as long as wide; northeastern Arkansas (also widely cultivated).....
.....2. *P. virginiana* (L.) Benth.
 - 2b. Rhizomes absent
 - 4a. Corolla rose-violet, with narrow basal tube 7–14 mm. long, markedly exceeding the calyx; calyx in flower 7–9 mm. long (including teeth); southwestern Louisiana and southeastern Texas.....
.....3. *P. serotina* Shinners
 - 4b. Corolla white with light violet base, the short basal tube 4–6 mm. long, not or barely exceeding the calyx; calyx in flower 6–1 mm. long; Fannin Co., north central Texas.....
.....4. *P. praemorsa* Shinners
- 1b. Annual with fleshy-fibrous roots (rarely with short-prolonged stem base), flowering April–July
 - 5a. Middle and lower leaves with oblong-ovate or obovate blades 2–6 cm. wide; plant 1–2 m. tall; Louisiana and eastern Texas..5. *P. obovata* (Ell.) Godfrey
 - 5b. Middle and lower leaves with oblong-lanceolate to narrowly oblanceolate blades 0.4–1.8 cm. wide; plant 0.3–1.5 m. tall
 - 6a. Corolla 2–3 cm. long
 - 7a. Lower leaves sessile or with winged-petiole base, the blades sharply serrate nearly or quite to base; Arkansas, Louisiana, eastern Texas to Blackland Prairie and E. Cross Timbers, eastern Oklahoma.....6. *P. angustifolia* Fernald
 - 7b. Lower leaves with slender petioles, the blades obtusely denticulate in apical $\frac{1}{4}$ – $\frac{3}{4}$; Edwards Plateau and Lampasas Section, central Texas
.....7. *P. edwardsiana* Shinners

- 6b. Corolla 1.0–1.7 cm. long.....
8. *P. intermedia* (Nutt.) Engelm. & Gray

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Zanthoxylum parvum (Rutaceae), a New Species from Trans-Pecos Texas

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ZANTHOXYLUM parvum Shinnery, sp. nov. ex affinitate *Z. americanum*. Frutex ad 1.5 m. altus aculeis rectis vel arcuatis 5–12 mm. longis ad nodos armatus. Foliola 7–9 late elliptico- vel ovato-lanceolata obtusa crenulata in ambitu pilosula 6–11 mm. longa. Inflorescentia quasi umbellata sessilis ante folia maturans. Flores 2–12 foeminei pedicellis 2–4 mm. longis parce pilosulis. Sepala desunt. Petala 4 elliptico- vel ovato-oblonga 1.6–1.9 mm. longa viridia apice rufobarbata. Ovarium crasso-stipitatum. Carpella 2–4 connata breviter tomentosa; styli sat tenues prius contorti quasi connati demum liberi, stigmatibus brevibus subclavatis. Flores mares fructusque ignoti. HOLOTYPE: Rocky (igneous) hills above Limpia Creek near Wild Rose Pass, about 15 miles N.E. of Ft. Davis, Jeff Davis Co., Texas, *Rogers McVaugh 7890*, 10 April 1947 (in Herb. Southern Methodist University). "High slopes under north-facing cliffs, branch canyon to east, just above pass. Shrub 1.5 m. high." The specimen is in flower, with very young leaves.

Evidently representing the same plant is a sterile specimen in mature in leaf, also from the Davis Mountains, "Frequent in dense oak shinnery on trail to Tricky Gap, Buffalo Trail Scout Ranch, 5500 [ft.]," *Barton H. Warnock & B. L. Turner 8089*, August 8, 1948 (SMU). The plant is evidently rare and of erratic flowering habits. Dr. Warnock informs me that the Sul Ross State College Herbarium has only three specimens possibly belonging here, all sterile.

Superficially the plant suggests *Z. sonorensis* Lundell (*Phytologia* 1: 369-370, 1940) or *Z. Fagara* (L.) Sargent,