

Scientific Name: *Matelea parviflora* (Torr.) Woodson

Synonyms: *Vincetoxicum parviflorum* (Torr.) Heller

Common Name: smallflower milkvine

Global/State Ranks: G3G4S3S4

Federal Status: None.

Global Range: Endemic to Texas.

State Range: Sandy areas in South Texas, including Atascosa, Brooks, Dimmit, Duval, Frio, Hidalgo, Jim Hogg, Jim Wells, Karnes, Kleberg, La Salle, Live Oak, Starr, Webb and Zapata counties (TEX-LL, 2001; Texas BCD, 2003). Reports from Brewster County are based on the similarly spelled *Matelea parvifolia*.

Description (adapted from Correll & Johnston, 1970): white-hairy herbaceous perennial with several prostrate but not twining stems from a thick rootstalk. **Leaves** opposite, simple, the petiole to 15 mm long, the blade almost round to broadly ovate-lanceolate, somewhat pointed at the tip and truncate at the base, up to 55 mm long (2 inches) long. **Flowers** in small clusters at the tip of rather long slender peduncles from the leaf axils; corolla greenish, rotate, 5-lobed, ovate to linear oblong, strongly reflexed, 3-5 mm (2/16 - 3/16 inch) long. **Fruit** an ellipsoid, single-chambered pod (follicle) about 9 cm (3 1/2 inches) long and 2 cm (3/4 inch) wide.

Similar Species: Much like *Matelea brevicoronata* (a quasi-rare endemic in its own right), from which it differs in characters of specialized parts of the flower. In *Matelea brevicoronata*, the outer appendages of the crown (between the corolla and the stamen column) are wider than long, about as long as the stamen column, and truncate to shallowly 3-lobed at the tip. In *Matelea parviflora*, the outer appendages are longer than wide, slightly to much longer than the stamen column, and distinctly 2-pointed at the tip.

Habitat: Open areas in mesquite savanna on sandy soils.

Phenology: Flowering intermittently (following rains?) throughout the season.

Comments: Recent field surveys in South Texas suggest that smallflower milkvine is more common than originally thought and probably should not be considered a species of concern.

Illustrations: None known.

Selected References:

Shinners, L. H. 1964. Texas Asclepiadaceae other than *Asclepias*. Sida 1(6): 358-367.

Scientific Name: *Matelea sagittifolia* (Gray) Woodson ex Shinners

Synonyms: *Gonolobus sagittifolius* Gray; *Matelea woodsonii* Shinners

Common Name: arrowleaf milkvine

Global/State Ranks: G3S3

Federal Status: None.

Global Range: Southern half of Texas and northern Nuevo León.

State Range: Small populations in various habitats in widely scattered locations including Hidalgo, Jeff Davis, McMullen, Real, San Patricio, Starr, Travis, Val Verde and Zapata counties.

Description (adapted from Correll & Johnston, 1970): Herbaceous perennial vine with twining stems 1-2 m long. **Leaves** opposite, simple, the petiole short; blade smooth, thickened, triangular lanceolate in outline and truncate to cordate or sagittate at the base, to 18 mm long and 6 mm wide. **Flowers** solitary or in twos on short axillary pedicels; corolla yellowish green or greenish yellow, with five linear-spatulate lobes, the lobes 7-10 mm long and about 1.5 mm wide. **Fruit** a single-chambered pod (follicle) that has not been described.

Similar Species: When not in flower, *Matelea sagittifolia* resembles several other milky-sapped vines, including *Cynanchum barbigerum* and a few other *Matelea* species. The rather short blade with its generally cordate base is a useful field character, but the unmistakable flowers are needed for identification.

Habitat: Various kinds of thornscrub and woodland edges, mostly on calcareous substrates.

Phenology: Flowering mostly during the spring; difficult to identify with certainty when not in bloom.

Comments:

Illustrations: None known.

Selected References:

Shinners, L. H. 1964. Texas Asclepiadaceae other than *Asclepias*. Sida 1(6): 358-367.

Scientific Name: *Monarda stanfieldii* Small

Synonyms: *Monarda punctata* L. var. *stanfieldii* (Small) Cory; *Monarda punctata* L. subsp. *stanfieldii* (Small) Epling

Common Name: Stanfield horsemint

Global/State Ranks: G5T3S3

Federal Status: None.

Global Range: Endemic to central Texas.

State Range: Largely confined to sands along the middle course of the Colorado River and its tributaries (Turner, 1994), with records from Blanco, Burnet, Llano and Travis counties.

Description (adapted from Correll & Johnston, 1970): Annual (or perennial?) with square stems up to 1 m tall but usually half that high. **Leaves** opposite, simple, conspicuously petiolate, lanceolate, usually 6-8 cm long, the margins sparingly serrate. **Flowers** in headlike clusters at and just below the tips of stems, zygomorphic, the corolla yellow with maroon spots on the upper lip. **Fruit** a set of four small separate nutlets.

Similar Species: Much like *Monarda punctata*, of which it is usually considered a variety or subspecies. According to Turner (1994), *Monarda stanfieldii* can be distinguished by its calyx mouth, which is closed by a dense mass of white hairs, and by its glabrous corolla tube.

Habitat: Grasslands, open areas, and disturbed sites, almost always on dry, very sandy soils.

Phenology: Flowering mostly May-June.

Comments: The conservation significance of this taxon is uncertain.

Illustrations: None known. Color illustrations of very similar and closely-related *Monarda punctata* appear in Ajilvsgi (2002), Enquist (1972), and Tull & Miller (1991).

Selected References:

- Ajilvsgi, G. 2002. Wildflowers of Texas. Revised edition. Shearer Publishing, Fredericksburg, Texas. 524 pp.
- Correll, D. S. and M. C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner. 1881 pp.
- Enquist, M. 1987. Wildflowers of the Texas Hill Country. Lone Star Botanical, Austin. 275 pp.
- McClintock, E. and C. Epling. 1942. A revision of the genus *Monarda* (Labiatae). University of California Publications in Botany 20(2): 147-192.
- Scora, R. W. 1967. Interspecific relationships in the genus *Monarda* (Labiatae). University of California Publications in Botany 38: 1-73.
- Turner, B. L. 1994. Taxonomic treatment of *Monarda* (Lamiaceae) for Texas and Mexico. Phytologia 77(1): 56-79.
- Tull, D. and G. O. Miller. 1991. A field guide to wildflowers, trees, and shrubs of Texas. Texas Monthly Field Guide Series. Gulf Publishing Co., Houston. 344 pp.

Scientific Name: *Monarda viridissima* Correll

Synonyms: None. Correll & Johnston (1970) listed *Monarda punctata* L. var. *immaculata* (Penn.) Scora as synonymous, but Turner (1994) placed var. *immaculata* in synonymy under *Monarda punctata* L. var. *lasiodonta* Gray.

Common Name: green beebalm, Texas beebalm

Global/State Ranks: G3S3

Federal Status: None.

Global Range: Endemic to central Texas.

State Range: Bastrop, Caldwell, Colorado (or Lavaca?), Guadalupe, Lee and Wilson counties (Turner, 1994; TEX-LL, 2002).

Description (adapted from Correll & Johnston, 1970): Perennial with several stems from a somewhat woody base, to 8 dm tall. **Leaves** opposite, linear to very narrowly linear-lanceolate, tapered to a petiole about 1 cm long, long-acuminate at apex, to 9 cm long and 8 mm wide, usually smaller, usually finely pubescent and with a few small teeth along the margins (but variable in both respects). **Flowers** in up to 5 whorls per stem; floral bracts conspicuous among the flowers, up to 2 cm long, deep cerise pink to purple; calyx 5-6 mm long, often tinged with purple-red, the 5 teeth about 1 mm long; corolla 2-lipped, white to creamy white, sometimes tinged with pink, with scattered reddish dots. **Fruit** a set of four separate nutlets.

Similar Species: In major themes, *Monarda viridissima* is much like other *Monarda* species in the region. However, its bright-green foliage is reportedly notable, as is its late (fall) blooming period.

Habitat: Openings and woodland margins on deep sands of the post oak belt of east-central Texas.

Phenology: Flowering mostly in the fall (late June-October) rather than in the spring like many similar *Monarda* species.

Comments:

Illustrations: None known.

Selected References:

- Correll, D. S. and M. C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner. 1881 pp.
- Turner, B. L. 1994. Taxonomic treatment of *Monarda* (Lamiaceae) for Texas and Mexico. *Phytologia* 77(1): 56-79.

Scientific Name: *Oenothera coryi* Wagner

Synonyms: None. This is a recent segregate from *Oenothera brachycarpa* Gray; true *Oenothera brachycarpa* occurs in west Texas rather than on the Panhandle and Rolling Plains (Wagner, 1986).

Common Name: Cory's evening-primrose

Global/State Ranks: G3G4S3

Federal Status: None.

Global Range: Endemic to Texas.

State Range: Panhandle and Rolling Plains, including Baylor, Callahan, Crosby, Garza, Knox, Nolan, Taylor and Throckmorton counties.

Description (adapted from Wagner, 1986): Perennial with a very short stem from a woody taproot. **Leaves** alternate or in basal rosettes, linear to narrowly lanceolate, 5-16 cm long and 2-7 mm wide, densely strigillose, the apex long-attenuate, the margins entire, rarely pinnately lobed in the lower half. **Flowers** solitary or few from leaf axils; buds with four free sepal tips 0.7-1.2 mm long; corolla tube 5.5-12.5 cm long; lobes four, yellow but fading to orange and drying lavender to purple, broadly obovate, 3.5-4.3 cm long and 3.7-4.2 cm wide. **Fruit** a woody capsule 2.5-3 cm long, ovoid, with four wings 4-6 mm wide.

Similar Species: Much like *Oenothera havardii*, which occurs in Colorado, Utah and Nevada but not Texas. In this state, it is most like *Oenothera brachycarpa*, in which the floral tube is 9-22 cm long, the free tips of the sepals (in bud) are 1-7 mm long, and the petals are broadly rhombic-obovate.

Habitat: Calcareous prairies and disturbed areas such as roadcuts.

Phenology: Flowering April-May (Wagner, 1986).

Comments:

Illustrations: None.

Selected References:

Wagner, W. L. 1986. New taxa in *Oenothera* (Onagraceae). *Annals of the Missouri Botanical Garden* 73: 475-480.

Scientific Name: *Onosmodium helleri* Small

Synonyms: None.

Common Name: Heller's marbleseed

Global/State Ranks: G3S3

Federal Status: None.

Global Range: Endemic to the Edwards Plateau of central Texas.

State Range: Bandera, Bexar, Comal, Hays, Kendall, Kerr, Travis and Uvalde counties (Turner, 1995; Mahler, 1981).

Description (adapted from Correll & Johnston, 1970): Herbaceous perennial with several stems from a slightly woody base; stems 1-2 ft tall; leaves large, alternate, dark green, strongly veined and rough to the touch; flowers in pendulous clusters, the five white petals seemingly joined at the tip, the flower thus appearing closed; fruit consisting of one or sometimes two small, white, globose, hard seeds about 1/8 inch in diameter, resembling very tiny marbles.

Similar Species: Similar to *Onosmodium bejariense* but differing in having dark green (instead of gray-green) and generally broader leaves, a persistent basal rosette, and technical characters.

Habitat: Oak-juniper woodlands on loamy soils of limestone canyon bottoms and lower portions of adjacent rocky slopes, usually in relatively mesic sites.

Phenology: A true woodland wildflower that produces flowers in early spring, before leaves appear on overtopping deciduous trees. Basal clusters of striking dark green leaves, which are sandpaper-like to the touch, can be detected throughout the year except perhaps during periods of prolonged drought.

Comments:

Illustrations: An original drawing by Linny Heagy appears in Diggs, Lipscomb & O'Kennon (1999). Color photographs of *Onosmodium helleri* and its congener, *Onosmodium bejariense*, appear in Enquist (1987).

Selected References:

- Diggs, G. M., Jr., B. L. Lipscomb and R. J. O'Kennon. 1999. Shiners and Mahler's illustrated flora of North-central Texas. Botanical Research Institute of Texas, Feet Worth. 1626 pp.
- Enquist, M. 1987. Wildflowers of the Texas Hill Country. Lone Star Botanical, Austin. 275 pp.
- Mackenzie, K. K. 1905. *Onosmodium*. Bulletin of the Torrey Botanical Club 32: 495-506.
- Mahler, W. F. 1981. Status report [on *Onosmodium helleri*]. Report prepared for U. S. Fish & Wildlife Service, Albuquerque.
- Turner, B. L. 1995. Synopsis of the genus *Onosmodium* (Boraginaceae). Phytologia 78(1): 39-60.

Scientific Name: *Paronychia jonesii* M. C. Johnston

Synonyms: None.

Common Name: Jones' nailwort

Global/State Ranks: G3S3

Federal Status: None.

Global Range: Endemic to South Texas.

State Range: Aransas, Brooks, Hidalgo, Kenedy, Kleberg, Nueces and Starr counties (Johnston, 1963; Turner, 1983).

Description (adapted from Correll & Johnston, 1970): Annual with branched prostrate stems up to 5 dm long. **Leaves** opposite, simple, oblanceolate, white-hairy, to 4 cm long and 8 mm wide. **Flowers** in dense cymes, consisting of 5 sepals but no petals; sepals strigose, the margins whitened, ca. 1.5 mm long, with a divergent pointed tip 0.5 mm long or less. **Fruit** a membranous utricle.

Similar Species: Similar to *Paronychia drummondii*, which ranges from coastal south Texas northward into Oklahoma and Louisiana. In that species, the stems are branched well above the base and are more or less erect, whereas in *Paronychia jonesii* the stems typically branch just above the base and are more or less prostrate.

Habitat: Low, often annual-dominated vegetation in early successional open areas on deep well-drained sand.

Phenology: Flowering more or less throughout the growing season.

Comments:

Illustrations: None published, but a digital image of the type specimen can be viewed on the Type Specimen Database of the Plant Resources Center of the University of Texas at Austin (www.biosci.utexas.edu/prc/databases.html).

Selected References:

- Johnston, M. C. 1963. A new species and some new nomenclature in the Texas flora. *Wrightia* 2(6): 249-151.
- Jones, F. B. 1977. Flora of the Texas Coastal Bend. Second edition. Welder Wildlife Foundation, Sinton. 262 pp.
- Turner, B. L. 1983. The Texas species of *Paronychia*. *Phytologia* 54: 9-23.

Scientific Name: *Paronychia setacea* T. & G.

Synonyms: Including var. *longibracteata* Chaudri

Common Name: bristle nailwort

Global/State Ranks: G3S3

Federal Status: None.

Global Range: Endemic to Texas.

State Range: Largely in the post oak belt of south-central Texas, from Atascosa, Medina and Bexar counties northeast to Robertson and Nacogdoches counties (map in Turner, 1983; BRIT/SMU, 1999; TEX-LL, 1999; TAES, 1999).

Description (adapted from Correll & Johnston, 1970): Glabrous annual with branching stems 12-30 cm tall. **Leaves** opposite, simple, subulate or setaceous, somewhat erect, 5-30 mm long and less than 1 mm wide. **Flowers** in a diffuse open cyme, usually shorter than the subtending leaves; calyx 5-lobed, the lobes green on the outside and yellowish and petaloid on the inside, about 2 mm long, tipped by an awn about a long as the body of the lobe. **Fruit** a membranous utricle.

Similar Species: Very difficult to distinguish from other nailworts in the region, especially *Paronychia lundellorum*.

Habitat: Unclear from information available, probably on claypans or other areas where peculiar soil chemistry / structure creates naturally sparse vegetation dominated by annuals.

Phenology: Flowering April through August (Correll & Johnston, 1970), or more likely throughout the growing season.

Comments:

Illustrations: None known. A digital photograph of the type specimen can be viewed on the website of the New York Botanical Garden.

Selected References:

Chaudri, M. M. 1968. A revision of the Paronychiinae. Revis. Paronychiinae. 440 p.
Turner, B. L. 1983. The Texas species of *Paronychia*. Phytologia 54: 9-23.

Scientific Name: *Pediomelum reverchonii* (S. Wats.) Rydb.

Synonyms: *Psoralea reverchonii* S. Wats.

Common Name: Reverchon's scurf-pea

Global/State Ranks: G3S2

Federal Status: None.

Global Range: Four counties in south-central Oklahoma (Grimes, 1990) and seven counties in north-central Texas.

State Range: Cooke, Hood, Johnson, Montague, Parker, Tarrant and Wise counties (Grimes, 1990; TEX-LL, 1998), mostly in prairies on shallow rocky calcareous substrates.

Description (adapted from Correll & Johnston, 1970): Erect perennial with single stem from base, branching only in the upper half, 5-12 dm tall. **Leaves** alternate, palmately compound with 3 (sometimes 5) leaflets, the leaflets elliptic to broadly elliptic, acute to mucronate at the tip, mostly 15-30 mm long and 5-9 mm wide; smooth on upper surface but pubescent on lower. **Flowers** in very short racemes terminating the many stem branches, pea-like, partly hidden by ovate-cordate bracts that are 11-20 mm long and 8-12 mm wide; flowers themselves 10-15 mm long, bluish to bluish lavender. **Fruit** a single-seeded pod 6-8 mm long with a beak 2-3 mm long.

Similar Species: The flora of Texas includes at least 15 *Pediomelum* taxa, many of them range-restricted. Among them, *Pediomelum reverchonii* is easily recognized by its branching habit, mostly trifoliolate leaves, and large, conspicuous floral bracts.

Habitat: Prairies on shallow stony soils over limestone.

Phenology: Flowering/fruitlet June - September.

Comments:

Illustrations: A line drawing by Linny Heagy appears in Diggs, Lipscomb & O'Kennon (1999).

Selected References:

- Correll, D. S. and M. C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner. 1881 pp.
- Diggs, G. M., Jr., B. L. Lipscomb and R. J. O'Kennon. 1999. Shinnery and Mahler's illustrated flora of North-central Texas. Botanical Research Institute of Texas, Ft. Worth. 1626 pp.
- Grimes, J. W. 1990. A revision of the New World species of *Psoraleae* (Leguminosae: Papilionideae). Memoirs of the New York Botanical Garden 61: 1-113.

Scientific Name: *Penstemon guadalupensis* Heller

Synonyms: None.

Common Name: Guadalupe penstemon

Global/State Ranks: G3S3

Federal Status: None.

Global Range: Endemic to central Texas.

State Range: Scattered in calcareous prairies on the Lampasas Cutplain and Edwards Plateau, with specimen records from Brown, Coke, Comanche, Gillespie, Irion, Kerr, Llano, McCulloch, Mitchell, Nolan, San Saba, Scurry, Tom Green and counties (BRIT/SMU, 1999; TAES, 1999; TEX-LL, 1998). A specimen attributed to Travis County (Edwards Plateau, 30 Mar 1935, *B. C. Tharp s.n.* TEX-LL) was probably collected elsewhere.

Description (adapted from Correll & Johnston, 1970): Herbaceous perennial with stems 25-35 cm tall (10-14 inches) tall. **Leaves** of stem opposite, glabrous to somewhat puberulent, entire to sparingly toothed, linear to lanceolate, 3-7 cm (1-3 inches) long, 2-18 mm (1/16 to 3/4 inch) wide. **Flowers** in a terminal panicle; corolla white, 13-20 mm (5/8 to 7/8 inch) long, two-lipped, the upper with two lobes, the lower with three lobes, all lobes spreading. **Fruit** a small capsule.

Similar Species: Numerous *Penstemon* species occur within the range of Guadalupe penstemon, particularly toward the northwestern limit of its range. The narrow leaves and short corolla of this species serve to distinguish it from those others.

Habitat: Shallow stony clays and clay loams in grasslands over limestone.

Phenology: Flowering March-May (Correll & Johnston, 1970).

Comments: *Penstemon* species are mostly very palatable and thus often absent from grasslands with a long history of heavy stocking.

Illustrations: A line drawing appears in Diggs, Lipscomb & O'Kennon (1999); a color photograph is provided in Enquist (1987).

Selected References:

- Correll, D. S. and M. C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner. 1881 pp.
- Diggs, G. M., Jr., B. L. Lipscomb and R. J. O'Kennon. 1999. Shinnery and Mahler's illustrated flora of North-central Texas. Botanical Research Institute of Texas, Ft. Worth. 1626 pp.
- Enquist, M. 1987. Wildflowers of the Texas Hill Country. Lone Star Botanical, Austin. 275 pp.

Scientific Name: *Platanthera chapmanii* (Small) Luer

Synonyms: *Blephariglottis chapmanii* Small; *Habenaria chapmanii* (Small) Ames. Treated by some as *Platanthera x chapmanii* (Small) Luer [*Habenaria x chapmanii* (Small) Ames], a hybrid between *Platanthera ciliaris* (L.) Lindl. and *Platanthera cristata* (Michx.) Lindl.

Common Name: Chapman's orchid

Global/State Ranks: G2S1

Federal Status: None.

Global Range: Southeastern Georgia, northern Florida and eastern Texas Sheviak, 2002).

State Range: Hardin, Jefferson, Orange and southern Tyler counties (Liggio & Liggio, 1999).

Description (adapted from Sheviak, 2002): Showy orchid with stems 30-77 cm (12 - 31 inches) tall. **Leaves** 1-3, alternate, simple, the blade linear-lanceolate to lance-oblong, 15-26 cm (6 - 10 3/8 inches) long and 1-3 cm (3/8 - 1 1/8) wide. **Flowers** in rather dense terminal spikes, orange to pale yellow, the lower lip deeply and conspicuously fringed, the spur slenderly cylindric, 8-17 mm (5/16 - 11/16 inch) long.

Similar Species: In some ways intermediate in appearance between *Platanthera ciliaris* and *Platanthera cristata*, both of which occur in east Texas. In those species, the rostellum (extension from the tip of the stigma) is straight rather than retrorsely bent as in *Platanthera chapmanii*, a difference that probably reflects a profound difference in pollination ecology. Several other differences are measurable, such as spur length, which is 20-35 mm (3/4 - 1 3/8 inch) in *Platanthera ciliaris*, 4-10 mm (1/8 - 3/8 inch) in *Platanthera cristata*, and intermediate-- 8-17 mm (5/16 - 11/16 inch) long-- in *Platanthera chapmanii*.

Habitat: In Texas, Chapman's orchid is restricted to wetland pine savannas, one of the states most endangered habitats.

Phenology: Flowering July-August (Liggio & Liggio, 1999)

Comments:

Illustrations: Color photographs appear in Luer (1975). A tiny line drawing of a flower appears in Correll (1978).

Selected References:

- Correll, D. S. 1978. Native orchids of North America north of Mexico. Stanford University Press reissue of 1950 edition published by Chronica Botanica Company. 399 pp.
- Liggio, J. and A. O. Liggio. 1999. Wild orchids of Texas. University of Texas Press, Austin. 228 pp.
- Luer, C. A. 1975. The native orchids of the United States and Canada excluding Florida. The New York Botanical Garden, New York. 361 pp.
- Sheviak, C. J. 2002. Pp. 551-571 in: Flora of North America Committee. 2002. Flora of North America north of Mexico. Volume 26. Magnoliophyta: Liliidae: Liliales and Orchidales. Oxford University Press, New York. 723 pp.

Scientific Name: *Pomaria austrotexana* B. B. Simpson

Synonyms: None.

Common Names: stinking rushpea, South Texas rushpea

Global/State Ranks: G3S3

Federal Status: None.

Global Range: South Texas and northern Tamaulipas (Simpson, 1998).

State Range: Restricted to the Holocene Sand Sheet of South Texas, with records from Brooks, Hidalgo, Kenedy, Jim Hogg, Starr and Zapata counties.

Description (adapted from Simpson, 1998): Subshrub the numerous decumbent stems from a woody base, the stems 15-60 cm tall. **Leaves** alternate, bipinnately compound, consisting of 5-7 pinnae each of which is then divided into 6-10 leaflets (terminal leaflet absent); leaflets oblong, 3-6 mm long, 1.0-2.5 mm wide, moderately to densely tomentose on upper surface, densely and evenly pilose with numerous glandular-punctate trichomes on lower surface. **Flowers** zygomorphic, in terminal racemes bearing 7-15 flowers on short pedicels; petals 5, yellow with reddish blotches and veins; stamens clustered and presented on top of protruding lower petal. **Fruit** a flattened pea pod 20-35 mm long and ca. 10 mm wide, sparingly covered in a variety of hairs and glands.

Similar Species: Much like camote del raton (*Pomaria melanosticta*), a species that ranges from central Mexico north to Trans-Pecos Texas (Simpson, 1998) and Starr County (Carr, King, Williams & Elliott 20598, TEX-LL). In *Pomaria melanosticta*, the sepals sport large glandular-punctate trichomes that are black when dry, as well as smaller red and orange peltate glandular trichomes; and the fruit margin has multicellular hairs as much as 1 mm long. In *Pomaria austrotexana*, there is only one type of punctate gland (the blackening kind) on the sepals; and although there are hairs along the margins of the fruit, none of them are multicellular.

Habitat: Along margins of mesquite (*Prosopis glandulosa*) - colima (*Zanthoxylum fagara*) mottes and woodlands on deep, well drained, hummocky sands.

Phenology: Flowering March-June and sometimes again later in the season (in response to rainfall?).

Comments:

Illustrations: A set of beautiful line drawings by Nancy Webber appears in Simpson (1998). [Note, however, that the drawing of the leaf incorrectly shows the presence of a terminal leaflet.] Color photographs of flowering stems appear in Everitt, Drawe & Lonard (2002). Photos of various parts appear in Simpson (1998). A digital image of the type specimen appears on the Type Specimen Database of the Plant Resources Center of The University of Texas at Austin (www.biosci.utexas.edu/prc/databases.html).

Selected References:

- Everitt, J. H., D. L. Drawe and R. I. Lonard. 2002. Trees, shrubs and cacti of South Texas. Revised edition. Texas Tech University Press, Lubbock. 249 pp.
- Simpson, B. B. 1998. A revision of *Pomaria* (Fabaceae) in North America. *Lundellia* 1: 46-71.

Scientific Name: *Prunus minutiflora* Engelm.

Synonyms: *Amygdalus minutiflora* (Engelm.) W. Wight

Common Name: Texas almond

Global/State Ranks: G3S3

Federal Status: None.

Global Range: Usually considered endemic to Texas. Reported from Chihuahua by Vines (1960), but the basis for that record is unknown.

State Range: Edwards Plateau, Llano Uplift and South Texas Plains, including Bell, Bexar, Burnet, Comal, Edwards, Frio, Irion, Kimble, Kinney, Live Oak, Mason, McMullen, Medina, Real, Travis, Uvalde, Val Verde, Williamson and Zavala counties (Wilkinson, 1977; TEX-LL, 1997).

Description (adapted from Correll & Johnston, 1970): Medium-sized, thornless shrub usually 6-12 dm (2-4 feet) tall, often forming an intricately-branched rounded mound; bark usually gray and somewhat shiny. **Leaves** 7-20 mm (1/2 to 1 inch) long, glabrous, oblong-elliptic, entire or with a few inconspicuous teeth. **Flowers** in small lateral clusters, with five white obovate petals each about 3.5 mm (less than 1/4 inch) long. **Fruit** dry, globose, ca. 12 mm (1/2 inch) in diameter.

Similar Species: Although easily overlooked when not in flower, *Prunus minutiflora* is a rather distinctive shrub within most of its range. Texas peachbush (*Prunus texana*), another Texas endemic, is similar but has pubescent leaves and a peachlike albeit tiny fruit.

Habitat: A variety of grassland and shrubland situations, mostly on calcareous soils underlain by limestone but also occasionally in sandier neutral soils underlain by granite.

Phenology: Early to mid spring; fruiting in June (Correll & Johnston, 1970). Flowers or fruits are helpful but not essential for identification.

Comments: According to Marshall Enquist (1987), the flowers of Texas almond have a sweet and heavy fragrance.

Illustrations: Line drawings appear in Lynch (1981), Powell (1998) and Vines (1960); a color photograph appears in Enquist (1987).

Selected References:

- Enquist, M. 1987. Wildflowers of the Texas Hill Country. Lone Star Botanical, Austin. 275 pp.
Lynch, D. L. 1981. Native and naturalized woody plants of Austin and the Hill Country. Acorn Press, Austin. 165 pp.
Powell, A. M. 1998. Trees and shrubs of the Trans-Pecos and adjacent areas. University of Texas Press. 498 pp.
Vines, R. A. 1960. Trees, shrubs and woody vines of the southwest. The University of Texas Press, Austin. 1104 pp.

Scientific Name: *Prunus texana* Dietr.

Synonyms: *Prunus glandulosa* (Hook.) T. & G.

Common Name: Texas peachbush, durasnillo

Global/State Ranks: G3S3

Federal Status: None.

Global Range: Endemic to Texas.

State Range: Mostly in sandy areas of the South Texas Plains, post oak belt on Eocene sands of the Coastal Plain, and the Llano Uplift, with records from Aransas, Atascosa, Bastrop, Bexar, Brooks, Goliad, Gonzales, Hidalgo, Kenedy, Kleberg, Llano, Mason, Refugio, San Patricio, Starr, Victoria, and Wilson counties.

Description (adapted from Correll & Johnston, 1970): Intricately branched shrub with somewhat shiny gray bark, usually less than 1.5 m tall; leaves alternate, on short petioles, simple, ovate to elliptic, 1.5-2 long and 6-10 mm wide (longer and wider on young shoots), green and pubescent on upper surface, grayish and more densely pubescent on lower surface, the margins with small but conspicuous glandular teeth; stipules present, linear, glandular; flowers appearing in very early spring, before the leaves, in small clusters from leaf axils; calyx 5-lobed; petals 5, white, oblong, 4./5-6 mm long; fruit a drupe up to 2 cm long and half as wide or more, densely peach-fuzzy or velvety-hairy.

Similar Species: In habit, Texas peachbush is much like Texas almond (*Prunus minutiflora*) a species of rocky sites on the Edwards Plateau and in south Texas. The two can easily be distinguished by the leaves alone, which are glabrous in *Prunus minutiflora* and pubescent in *Prunus texana*. The unrelated hog plum (*Colubrina texensis*) in somewhat similar in shape and often occurs on sandy sites; its leaves lack the glandular teeth of *Prunus texana*.

Habitat: Oak or mesquite woodland / midgrass grassland mosaics on deep, well drained sandy soils.

Phenology: Flowering in early spring (January- March); fruiting in June.

Comments:

Illustrations: A line drawing appears in Vines (1960); color photograph appears in Enquist (1987) and Everitt & Drawe (1993).

Type specimen:

Selected References:

- Correll, D. S. and M. C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner. 1881 pp.
- Enquist, M. 1987. Wildflowers of the Texas Hill Country. Lone Star Botanical, Austin. 275 pp.
- Everitt, J. H. and D. L. Drawe. 1993. Trees, shrubs and cacti of South Texas. Texas Tech University Press, Lubbock. 213 pp.
- Mason, S. C. 1913. The pubescent-fruited species of *Prunus* of the southwestern states. Journal of Agricultural Research 1(2): 147-177.
- Vines, R. A. 1960. Trees, shrubs and woody vines of the southwest. The University of Texas Press, Austin. 1104 pp.

Scientific Name: *Rhododon ciliatus* (Benth.) Epling

Synonyms: *Hedeoma ciliata* Benth.; *Hedeoma texanum* Cory; *Stachydeoma ciliata* (Benth.) Small; *Stachydeoma duvalii* Tharp.

Common Name: Texas sandmint

Global/State Ranks: G3S3

Federal Status: None.

Global Range: Endemic to Texas.

State Range: Post Oak Belt of east-central Texas, with records from Anderson, Austin, Bastrop, Burleson, Caldwell, Freestone, Gonzales, Lee, Leon, Limestone, Milam, Montgomery, Robertson, Smith, Van Zandt and Waller counties (Turner, 1995; TEX-LL, 2002).

Description (adapted from Correll & Johnston, 1970 and Turner, 1995): Annual with erect square stems 15-25 cm tall, variously pubescent. **Leaves** opposite, simple, sessile, elliptic-oblong, 15-20 mm long, 2-3.5 times long as wide, the margins entire but long-ciliate. **Flowers** in dense axillary cymes collectively forming a compact thyrse 3-6 cm long, on pedicels about half as long as the calyx; calyx somewhat two-lipped, the tube about 5 mm long and the 5 teeth about as long as the tube, pubescent throughout; corolla pale-pink to purple, 2-lipped, 5-6 mm long; stamens 2.

Similar Species: *Rhododon angulatus*, which is endemic to deep sand sites on the Ingleside Barrier in the Coastal Bend, is very similar; in fact, plants from those population were until recently considered to be *Rhododon ciliatus*. In *Rhododon angulatus*, the flower spikes are interrupted; the leaves are only 1.5-2.0 times long as wide; and the calyx is only patchily pubescent (Turner, 1995).

Habitat: Open areas on uplands underlain by deep loose sands of various Eocene formations.

Phenology: Flowering May-July.

Comments:

Illustrations: None published, but several excellent photographs appear on the Digital Flora of Texas vascular plant image gallery (<http://www.csdl.tamu.edu/FLORA/gallery.htm>).

Selected References:

- Correll, D. S. and M. C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner. 1881 pp.
- Irving, R. S. 1980. Status report [on *Rhododon ciliatus*]. Report prepared for U. S. Fish & Wildlife Service, Albuquerque.
- Turner, B. L. 1995. Synoptical study of *Rhododon* (Lamiaceae). Phytologia 78(6): 448-451.

Scientific Name: *Rhynchospora indianolensis* Small

Synonyms: None.

Common Name: Indianola beakrush

Global/State Ranks: G3QS3

Federal Status: None.

Global Range: Long thought to be endemic to Texas, but now considered by some to be indistinct from *Rhynchospora scutellata* Griseb., a species ranging from Argentina through Central America to the West Indies (Thomas, 1992).

State Range: Upper Texas coastal plain, with specimen records from Aransas, Calhoun, Colorado, Goliad, Harris, Jackson, Matagorda, Refugio, San Patricio and Victoria counties (BRIT/SMU, 1999; CCM, 1998; TEX-LL, 2003; TAES, 1999; SBSC, 1999).

Description (adapted from Correll & Johnston, 1970): Rather large, clump-forming perennial sedge with culms as much as 1 m tall; inflorescence terminal, with several ascending rays terminated by clusters of roundish glomerules of sessile spikelets; spikelets 7-10 mm long, rusty brown at maturity; bristles 3-5, about as long as body of achene; achene ca. 7-8 mm long, the elongate-deltoid tubercle about as long as the body (both ca. 3.5-4 mm long).

Similar Species: No *Rhynchospora* species in the area has an achene of this length with the body and tubercle subequal.

Habitat: Coastal prairies and drainage ditches on somewhat moist to wet clayey to loamy soils.

Phenology: Flowering almost throughout the year.

Comments: Although seldom collected or discussed, *Rhynchospora indianolensis* is locally abundant in pastures on poorly drained soils in the Coastal Bend and mid-Gulf coast. Like many sedges, it seems to increase under heavy grazing.

Illustrations: None known. A color digital image of the type specimen is available on the w³TROPICOS website of the Missouri Botanical Garden (www.mobot.org).

Type specimen: [County not given:] Damp prairie near Indianola, 2 May 1869, *H. Ravenel 160* (holotype NY; isotype MO).

Selected References:

Correll, D. S. and M. C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner. 1881 pp.

Thomas, W. W. 1992. A synopsis of *Rhynchospora* (Cyperaceae) in Mesoamerica. *Brittonia* 44(1): 14-44.

Scientific Name: *Schoenolirion wrightii* Sherman

Synonyms: *Schoenolirion texanum* (Scheele) Gray, misapplied.

Common Name: Texas sunnybell

Global/State Ranks: G3S2

Federal Status: None.

Global Range: Northeastern Alabama, south-central Arkansas, Louisiana and east Texas (Louisiana Natural Heritage Program, 1995; Orzell, 1990).

State Range: Rocky barrens in the Post Oak region near College Station, with a few disjunct populations on the Catahoula Formation of southeast Texas (Orzell, 1990). There are records from Austin, Brazos, Burleson, Fayette, Grimes, Hardin, Jasper, Tyler and Walker counties.

Description (adapted from Correll & Johnston, 1970 and Orzell, 1990): Perennial from a thick rootstalk. **Leaves** in a basal cluster, grasslike, mostly about 4 mm wide, elongate. **Flowers** in short racemes at the end of a leafless scape mostly 25 cm tall or less; tepals 6, greenish-white, 3- 5-nerved, elliptic or oblong, 4.0-4.5 mm (3/16 inch) long. **Fruit** a deeply 3-lobed globose capsule 4-5 mm (1/8 - 3/16 inch); seeds subglobose, shiny, about 2 mm long.

Similar Species: Very much like *Schoenolirion croceum*, if which the leaves are usually broader than 4 mm and the seeds are about 4 mm long. The tepals of *Schoenolirion croceum* are usually yellow, sometimes tinged with red. It usually occurs in bogs and other obviously wet habitats.

Habitat: Grasslands and forb-dominated vegetation of wet glades and barrens. Associates on a Catahoula barren in Jasper County include Nuttall's rayless golden-rod (*Bigelovia nuttallii*), Texas saxifrage (*Saxifraga texana*), prairie fame-flower (*Talinum parviflorum*), San Saba pinweed (*Lechea san-sabeana*), lepuropetalon (*Lepuropetalon spathulatum*), and foliose lichens (Orzell, 1990).

Phenology: Flowering and fruiting March-May, peaking in mid to late April (Orzell, 1990). Because of its grasslike leaves, *Schoenolirion wrightii* is easily overlooked when not in flower.

Comments:

Illustrations: A line drawing is provided in Nixon and Ward (1981). A color photograph appears in Hunter (1992).

Selected References:

Correll, D. S. and M. C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner. 1881 pp.

Hunter, C. G. 1992. Wildflowers of Arkansas. Third edition. Ozark Society Foundation, Little Rock. 296 pp.

Kral, R. 1983. A report on some rare, threatened, or endangered forest-related vascular plants of the South. USDA, Forest Service, Technical Publications R8-TP2. 1305 pp.

Nixon, E. S. 1980. Status report [on *Schoenolirion wrightii*]. Report prepared for U. S. Fish & Wildlife Service, Albuquerque. 14 pp.

Nixon, E. S. and J. R. Ward. 1981. Distribution of *Schoenolirion wrightii* (Liliaceae) and *Bartonia texana* (Gentianaceae). Sida 9:64-69.

- Nixon, E. S., K. L. Marietta, and M. McCrary. 1980. *Brachyelytrum erectum* and *Talinum rugospermum*, a new species to Texas and notes on *Schoenolirion wrightii*. Sida 8: 355-356.
- Orzell, S. L. 1990. Inventory of National Forests and National Grasslands in Texas. Report submitted in fulfillment of agreement between the Texas Natural Heritage Program of Texas Parks and Wildlife Department and the U. S. Forest Service in Lufkin, Texas. 526 pp.
- Sherman, H. L. 1969. A systematic study of the genus *Schoenolirion* (Liliaceae). Ph.D. dissertation, Vanderbilt University.
- Sherman, H. L. 1979. Evidence of misapplication of the name *Schoenolirion texanum* (Scheele) Gray (Liliaceae). Southwestern Naturalist 24: 123-126.

Scientific Name: *Schoenoplectus hallii* (Gray) S. G. Smith

Synonyms: *Scirpus hallii* Gray; *Scirpus supinus* L. var. *hallii* (Gray) Gray

Common Name: Hall's baby bulrush

Global/State Ranks: G2S1

Federal Status: None.

Global Range: Known from numerous states in the eastern half of the United States, but details uncertain due to taxonomic confusion and misidentifications. NatureServe (February 2004) reported the species from Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Massachusetts, Michigan, Missouri, Nebraska, Ohio, Oklahoma, South Carolina and Wisconsin. PLANTS database (February 2004) added Alabama but excluded Ohio. The treatment by S. Galen Smith in the Flora of North America (Flora Online, 2004) restricts the range to Georgia, Illinois, Indiana, Kansas, Kentucky, Massachusetts, Missouri, Nebraska, Oklahoma and Wisconsin.

State Range: Recently discovered in Wise County (Bob O'Kennon pers. comm., October 2003); voucher specimens were annotated by S. Galen Smith. Previous reports from Texas (Correll & Johnston, 1970) were based on misidentifications.

Description (adapted from on-line treatment in Flora of North America by S. Galen Smith): Annual sedge with culms arching to decumbent, ranging from 5 to 80 cm (2 - 32 inches) long and less than 1 mm (less than 1/16 inch) wide. **Leaves** 3-4, up to 20 cm (8 inches) long and 1 mm (less than 1/16 inch) wide or less. **Flowers** in headlike clusters subtended by at least one long leaflike bract; spikelets 1-5, 5-20 mm (3/16 - 3/4 inch) long and 2-3 mm (less than 1/8 inch) wide; scales straw-colored to pale orange-brown to nearly colorless (particularly along margins), ovate, 2.5-5 mm (1/8 - 3/16 inch) long and 1.5 mm (less than 1/8 inch) wide, acute at apex. **Fruit** a blackish-brown achene 1.3-1.7 (less than 1/8 inch) mm long and 1.2-1.3 mm (less than 1/8 inch) wide, ovoid to obovoid in outline, adaxially concave (like a squashed C in cross-section), with 15-18 horizontal ridges and a very short beak.

Similar Species: *Schoenoplectus erectus* (incl. *Scirpus wilkensisii* of Correll & Johnston, 1970) and *Schoenoplectus saximontanus* (*Scirpus saximontanus* and *Scirpus bergsonii* of Correll & Johnston, 1970) both occur in Texas and are extremely similar to *Schoenoplectus hallii*. Determination of specimens of this group should be attempted only by an expert with access to a herbarium containing annotated collections of all three taxa.

Habitat: Recently discovered on mudflats around ponds in Wise County, where it occurred with *Eleocharis coloradoensis* and *Pilularia americana* (Bob O'Kennon pers. comm., October 2003).

Phenology: Flowering / fruiting primarily in summer and fall but possibly during other periods.

Comments:

Illustrations: A line drawing appears in Britton & Brown (1913) and is reproduced on the PLANTS database website (USDA, NRSC, 2004). Drawings of scale, achene and achene cross-section appear in Volume 23 of the Flora of North America and can be viewed on-line (Flora Online, 2004).

Selected References:

Britton, N. L. and A. Brown. 1913. An illustrated flora of the northern United States and Canada. 1970 Dover Reprint edition, New York. 3 volumes.