

THYMELAEA PASSERINA (THYMELAEACEAE) NEW TO TEXAS

Walter C. Holmes

Department of Biology
Baylor University
Waco, TX 76798-7388, U.S.A.
walter_holmes@baylor.edu

John F. Pruski

United States National Herbarium
Department of Botany
Smithsonian Institution, Washington, DC 20560-0166, U.S.A.
pruski.john@nmnh.si.edu

Jason R. Singhurst

Wildlife Diversity Program
Texas Parks and Wildlife Department
Austin, TX 78704, U.S.A.
jason.singhurst@tpwd.state.tx.us

Thymelaea passerina (L.) Cosson & J. Germain was first reported in the United States by Pohl (1955). In reporting *T. passerina* as new to Ohio, Vincent and Thieret (1987) presented an expanded account of the occurrence of the species in the United States, mentioning its presence in Illinois, Iowa, Kansas, and Nebraska. Additionally, *Thymelaea passerina* has also been reported from Alabama (Webb et al. 1997), Mississippi (Wofford & DeSelm 1988), Washington (USDA, NRCS 1999), and Wisconsin (Harriman 1979). The species is not cited in any of the recent references or checklists treating the flora of Texas (Correll & Johnston 1970; Hatch et al. 1990; Johnston 1990; Jones et al. 1997), nor is it included in Diggs et al. (1999) in their flora of the north central part of the state. A description of the species and pertinent synonymy follow.

Thymelaea passerina (L.) Cosson & J. Germain, Syn. Fl. Env. Paris, ed. 2, 360. 1859. (**Fig. 1**).
Stellera passerina L., Sp. Pl. 559. 1753. Complete synonymy given by Tan (1980).

Taprooted annual to 55–60 cm tall; stems erect, slender, simple or more commonly with few to several ascending branches in distal half, glabrous or weakly pilose distally, yellowish green; leaves alternate, simple, exstipulate, sessile or nearly so, linear-lanceolate, 7–15 mm long, 1–2 mm wide, stiffly chartaceous or subcoriaceous, glabrous or less commonly abaxially weakly puberulent, apex acute, margins entire. Inflorescence axillary, flowers often 3 but ranging from 1–7 in distal leaf axils, cluster commonly subtended by 2 green bracts, bracts lanceolate to broadly so, to ca. 1.5 mm long, basally ciliate; flowers bisexual, actinomorphic, perigynous, sessile, 2–3 mm long, corollas absent, sepals 4, weakly

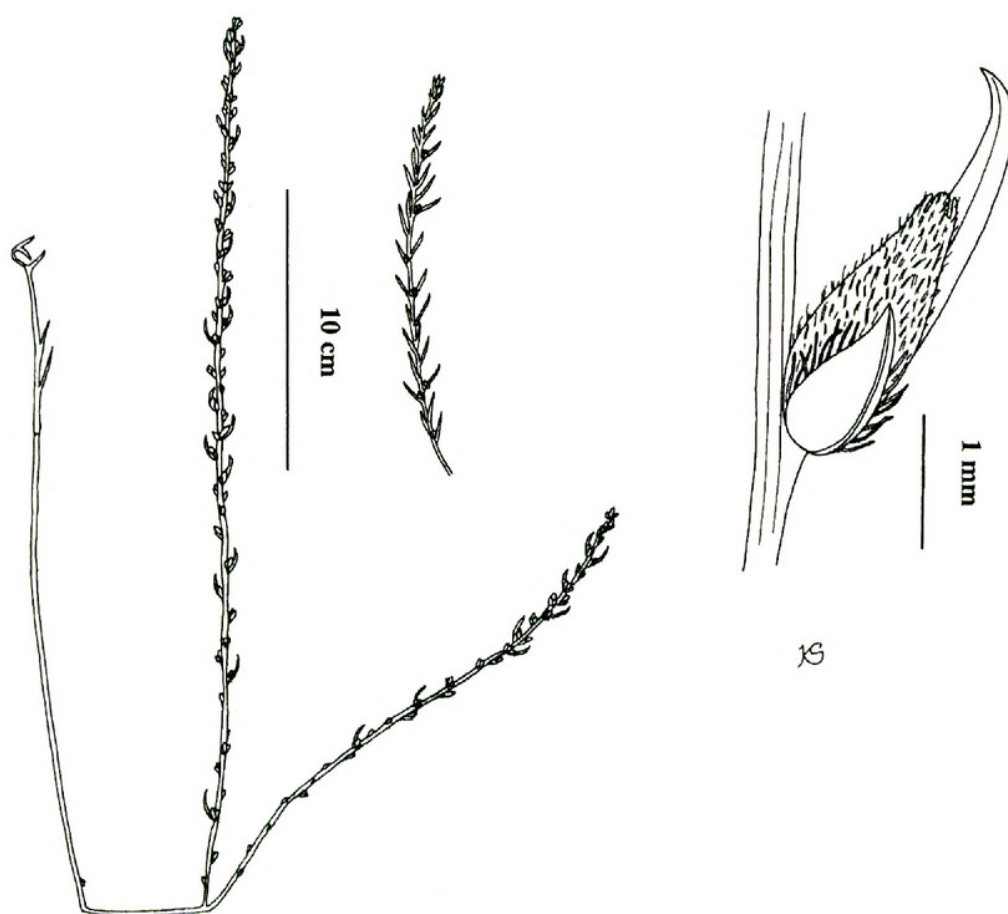


FIG. 1. *Thymelaea passerina*. Left, habit; Center, younger branch before loss of some leaves; Right, persistent hypanthium with enclosed fruit. [From Vincent and Thieret in Sida 12:77. 1987. Used with permission.]

petaloid, manifested as minute (ca. 0.5 mm long) ovate to lance-ovate greenish yellow lobes with obtuse apices on top of the urceolate, persistent hypanthium, hypanthium and calyx lobes subtrigose, stamens episealous, 8, bicyclic, included, filament much shorter than the anther thecae, ovary superior, apically hirsute-villous, subtended by a hypogynous disk, bicarpellate but unilocular by abortion, style one, terminal, short, ovule one, pendulous. Fruit a dry, indehiscent, 1-seeded, 1-locular capsule, apically beaked, enclosed within the persistent hypanthium; seed ovoid, 2–3 mm long, brown to black. Chromosome number $2n = 18$.

This Eurasian weed of *Thymelaea* section *Lygia* (Tan 1980) has been reported within the United States from Alabama (Webb et al. 1997), Illinois (Mohlenbrock & Ladd 1978), Iowa (Pohl 1955), Kansas (McGregor et al. 1986), Mississippi (Wofford & DeSelm 1988), Nebraska (Pohl 1955), Ohio (Vincent & Thieret 1987), Washington (USDA, NRCS 1999), Wisconsin (Harriman 1979), and is here newly documented for the flora of Texas. It has also been introduced into Australia. Flowering time for the North American populations ranges from (April) June to September.

Specimens cited: **TEXAS. Denton Co.:** approximately 5 mi E of Sanger on FM 455, 24 Jun 1999, *Singhurst 8156* (BAYLU, TEX, US). **Fannin Co.:** 0.5 mi E of Haile Community on FR 1550, N 33.51173, W 96.05437, 5 Jun 1999, *Holmes 10173 & Singhurst* (BAYLU, TEX, US).

We believe that the species was likely introduced to Texas through the use of agricultural machinery imported from further north and used to harvest wheat, the dominant crop in both areas. The Denton County specimen is from the Cross Timbers and Prairies vegetational region of the state, an area characterized by slightly acidic to acidic sandy loam soils (Correll & Johnston 1970). Associated species included *Dalea purpurea*, *Indigofera miniata* (Leguminosae), *Froelichia floridana* (Amaranthaceae), *Helianthemum georgianum*, *Lechea mucronata*, *L. tenuifolia* (Cistaceae), *Hypericum drummondii* (Hypericaceae), and *Krameria lanceolata* (Krameriaceae). The Fannin County specimen occurred in the margins of roads and wheat fields in clay over limestone "chalk" on the Gober Limestone Formation of the Blackland Prairie vegetation region of the state. Common associates included *Asclepias asperula* (Asclepiadaceae), *Forestiera pubescens* (Oleaceae), *Hypericum perforatum* (Hypericaceae), *Rhus aromatica* (Anacardiaceae), *Sedum pulchellum* (Crassulaceae), and *Sophora affinis* (Leguminosae).

The documentation of *Thymelaea passerina* as new to Texas is not only a report of a new genus and species to the known non-cultivated flora of the state, but another family, the Thymelaeaceae. Jones et al. (1997), in their checklist of the vascular flora for the state, included two species of Thymelaeaceae, *Daphne cannabina* Wall. (= *D. papyracea* Wall. ex Steud. according to Huxley 1992) and *D. cneorum* L., but both of these are cultivated and not known to escape in Texas.

ACKNOWLEDGMENTS

We thank James Solomon (MO) and Michael Nee (NY) for searching for specimens of North American *Thymelaea passerina* in MO and NY, respectively; and Aaron Goldberg (US) and Monique Reed for helpful comments on the manuscript. We are grateful to Tom Wendt (TEX) for providing other assistance and to Michael Vincent (MU) and John Thieret (KNK) for their helpful reviews and permission to use the illustration.

REFERENCES

- CORRELL, D.S. and M.C. JOHNSTON. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner.
- DIGGS, G.M., JR., B.L. LIPSCOMB, and R.J. O'KENNON. 1999. Shinnery & Mahler's illustrated flora of north central Texas. Botanical Research Institute of Texas, Fort Worth.
- HARRIMAN, N.A. 1979. Four additions to the Wisconsin flora. Michigan Bot. 18:143–145.
- HATCH, S.L., K.N. GANDHI and L.E. BROWN. 1990. Checklist of the vascular plants of Texas. The Texas Agricultural Experiment Station, Texas A&M University, College Station.
- HUXLEY, A. (Ed.-in-Chief). 1992. The new Royal Horticultural Society Dictionary of gardening, vol. 2, D to K, Macmillan Press, London & Stockton Press, New York.
- JOHNSTON, M.C. 1990. The vascular plants of Texas. A list, up-dating the manual of the vascular plants of Texas. Published by the author, Austin.

- JONES, S.D., J.K. WIPFF, and P.M. MONTGOMERY. 1997. Vascular plants of Texas: a comprehensive checklist including synonymy, bibliography, and index. University of Texas Press, Austin.
- MCGREGOR, R.L., T.M. BARKLEY, R.E. BROOKS, and E.K. SCHOFIELD (eds.). 1986. Flora of the Great Plains. University Press of Kansas, Lawrence.
- MOHLENBROCK, R.H. and D.M. LADD. 1978. Distribution of Illinois vascular plants. Southern Illinois University Press, Carbondale.
- POHL, R.W. 1955. *Thymelaea passerina*, a new weed in the United States. Proc. Iowa Acad. Sci. 62:152–154.
- TAN, K. 1980. Studies in the Thymelaeaceae II: a revision of the genus *Thymelaea*. Notes Royal Bot. Gard. Edinburgh 38:189–246.
- USDA, NRCS. 1999. The PLANTS database (<http://plants.usda.gov/plants>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.
- VINCENT, M.A. and J.W. THIERET. 1987. *Thymelaea passerina* (Thymelaeaceae) in Ohio. Sida 12:75–78.
- WEBB, D.H., H.R. DE SELM, and W.M. DENNIS. 1997. Studies of prairie barrens of northwestern Alabama. Castanea 62:173–184.
- WOFFORD, B.E. and H.R. DE SELM. 1988. Distribution of and first report of *Thymelaea passerina* from the southeastern United States. Castanea 53:305–306.



Holmes, Walter C., Pruski, John F , and Singhurst, Jason R. 2000. "THYMELAEA PASSERINA (THYMELAEACEAE) NEW TO TEXAS." *SIDA, contributions to botany* 19, 403–406.

View This Item Online: <https://www.biodiversitylibrary.org/item/36567>

Permalink: <https://www.biodiversitylibrary.org/partpdf/163326>

Holding Institution

Missouri Botanical Garden, Peter H. Raven Library

Sponsored by

Missouri Botanical Garden

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.