Reid, C.S., M. Bible, and D. Moreland. 2024. *Ludwigia peruviana* (Onagraceae) in the Louisiana flora. Phytoneuron 2024-72: 1–5. Published 11 November 2024. ISSN 2153 733X

LUDWIGIA PERUVIANA (ONAGRACEAE) IN THE LOUISIANA FLORA

CHRISTOPHER S. REID
Louisiana State University
School of Renewable Natural Resources
Baton Rouge, Louisiana
creid4@lsu.edu

MARK BIBLE
P.O. Box 1403
Slidell, Louisiana 70459

DAVID MORELAND
18587 Highway 10
Clinton, Louisiana 70722
HeflinRoots@hotmail.com

ABSTRACT

We report *Ludwigia peruviana* new to Louisiana based on a robust population along the West Pearl River in the southeastern part of the state. We also discovered an overlooked Louisiana record from near the mouth of the Mississippi River made at the turn of the 20th century and note that recent iNaturalist observations apparently show the species from several other localities in the state.

Ludwigia peruviana (L.) Hara (Peruvian primrose-willow) naturally ranges from southern Mexico and the West Indies south through the tropics to northern Argentina (Hoch 2021; POWO 2024; Weakley 2024). It is regarded as exotic in the following southeastern USA states: Alabama, Florida, Georgia, Mississippi, North Carolina, and Texas (Kartesz 2015; USDA, NRCS 2024; Weakley 2024). This species is pervasive in Florida (Weakley 2024) where it is listed as a Category I invasive exotic (FLEPPC 2019). *Ludwigia peruviana* is not included in the Louisiana Flora by standard references (Kartesz 2015; USDA, NRCS 2024; Weakley 2024), but it was reported for Louisiana by Muenscher (1944) — this literature report was rejected by Thomas and Allen (1998), presumably because they were not aware of specimens supporting Muenscher's inclusion of *L. peruviana* in Louisiana.

In October 2022, we documented an apparently spontaneous and self-seeded population of *Ludwigia peruviana* along West Pearl River in St. Tammany Parish, located in extreme southeastern Louisiana (Figure 1).

Louisiana. St. Tammany Par.: W bank of the West Pearl River, 3.4 river mi downstream from Crawford's Landing and 2.9 river mi downstream from Interstate 10 bridge, 2.55 river mi upstream from US 90 bridge; 30.26129°, -89.68089°, abundant on open river bank at a small inlet, occupying an area ca. 15' by 40', growing with *Colocasia esculenta*, *Acer rubrum* var. *drummondii*, and *Zizaniopsis miliacea*, 9 Oct 2022, *Reid 10,680* (LSU, Fig. 3). **Plaquemines Par.:** Port Eads, 21 Aug 1900, *Lloyd 239* (CM, Fig. 2), *Tracy 209* (NEB).

We initially regarded our record as being the first for Louisiana. However, Lloyd and Tracy (1901) reported *Ludwigia peruviana* from Port Eads, at the mouth of the Mississippi River, where it was growing on ballast ground. Their specimens are cited below. Lloyd's specimen (Fig. 2) is correctly identified. We were not able to obtain an image of Tracy's specimen housed at NEB. Two other specimens identified as *L. peruviana* were encountered while searching SERNEC (2024). These specimens were collected from Iberia and Ouachita Parishes (*Brown 6364*-GH and *Smith s.n.*-COLO, respectively). However, these specimens are misidentified and instead are *L. grandiflora* (Michx.) Greuter & Burdet, as determined by examining images.

In addition to the collections cited above, iNaturalist reports (2024) show *Ludwigia peruviana* in Louisiana. Three in particular, from Assumption (observation ID 134315755), St. Tammany (observation ID 168706335), and Terrebonne (observation ID 190278481) parishes, appear to be correctly identified. We recommend that these reports be investigated and if they are indeed of *L. peruviana*, that they be documented with voucher specimens.

Figure 1. The second author among *Colocasia esculenta* and *Zizaniopsis miliacea* with *Ludwigia peruviana* behind him (having yellow flowers). This image was taken on 22 October 2022 along West Pearl River, St. Tammany Parish, Louisiana.

Figure 2. *Ludwigia peruviana* (*Lloyd 239*, CM) from Port Eads, Louisiana, which is near the terminus of South Pass, at the mouth of the Mississippi River. Image courtesy of Bonnie Isaac.

Figure 3. *Ludwigia peruviana* from St. Tammany Parish, Louisiana, in October 2022, establishing this species as a contemporary member of the state flora. Diagnostic features are 4 sepals, turbinate shape of ovaries/capsules, ridges on ovaries/capsules, and the woody nature of the main stem (Hoch 2021). This is one of four sheets documenting this population. Large plant size necessitated collecting multiple specimens, which are all viewable on SERNEC (2024).

ACKNOWLEDGEMENTS

We thank the following herbarium curators for kindly providing high-resolution specimen images that were vital to this work: Bonnie Isaac (CM) and J. Ryan Allen (COLO). We also appreciate the critical reviews by John Michael Kelley and Lowell E. Urbatsch.

LITERATURE CITED

FLEPPC. 2019. List of Invasive Plant Species. Florida Exotic Pest Plant Council.

Hoch, P.K. 2021. *Ludwigia* (Onagraceae). Pp. 70–101, in Flora of North America North of Mexico, Vol. 10. Oxford Univ. Press, New York and Oxford.

iNaturalist. 2024. <https://www.inaturalist.org> Accessed 30 July 2024.

Kartesz, J.T. 2015. The Biota of North America Program (BONAP). North American Plant Atlas (http://www.bonap.net/napa). Chapel Hill, North Carolina.

Lloyd, F.E. and S.M. Tracy. 1901. The insular flora of Mississippi and Louisiana. Bull. Torrey Bot. Club 28: 61–101.

Muencscher, W.C. 1944. Aquatic Plants of the United States. Cornell Univ. Press, Ithaca, New York.

POWO. 2024. Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. <http://www.plantsoftheworldonline.org/> Accessed 01 July 2024.

SERNEC Data Portal. 2024. SouthEast Regional Network of Expertise and Collections. <https://sernecportal.org/portal/> Accessed July 2024.

Thomas, R.D and C.M. Allen. 1998. Atlas of the Vascular Flora of Louisiana, Vol. 3. Louisiana Department of Wildlife & Fisheries, Baton Rouge.

USDA, NRCS. 2024. The PLANTS Database (http://plants.usda.gov, 30 July 2024). National Plant Data Team, Greensboro, North Carolina.

Weakley, A.S. and Southeastern Flora Team. 2024. Flora of the Southeastern United States. Univ. of North Carolina Herbarium, North Carolina Botanical Garden, Chapel Hill. <fsus.ncbg.unc.edu> Accessed July 2024.