

# FIRST RECORD OF *PLEIOBLASTUS FORTUNEI* (POACEAE) FROM THE ARKANSAS (U.S.A.) FLORA

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## ABSTRACT

The first naturalized occurrence of *Pleioblastus fortunei* (Poaceae) in the Arkansas flora is reported here from Columbia County. In 2024, a large, naturalized population of *P. fortunei* was discovered in highly disturbed riparian habitat adjacent to a large residential area, within the city of Magnolia. Plants were sterile but aggressively establishing via rhizomatous offsets. The precise origin of the naturalized plants is unknown, although establishment from once cultivated plants of the species is suspected, as a residence adjacent to the location of the naturalized plants had a large colony of *P. fortunei* that had spread throughout much of the property.

## RESUMEN

Aquí se informa de la primera presencia naturalizada de *Pleioblastus fortunei* (Poaceae) en la flora de Arkansas, en el condado de Columbia. En 2024, se descubrió una gran población naturalizada de *P. fortunei* en un hábitat ribereño muy perturbado adyacente a una gran zona residencial, dentro de la ciudad de Magnolia. Las plantas eran estériles pero se establecían agresivamente a través de vástagos rizomatosos. Se desconoce el origen exacto de las plantas naturalizadas, aunque se sospecha que se establecieron a partir de plantas de la especie cultivadas en el pasado, ya que una residencia adyacente a la ubicación de las plantas naturalizadas tenía una gran colonia de *P. fortunei* que se había extendido por gran parte de la propiedad.

KEY WORDS: Poaceae, pygmy bamboo, Arkansas, Columbia County, *Pleioblastus*

## INTRODUCTION

*Pleioblastus fortunei* (Van Houtte) Nakai [Syn.: *P. pygmaeus* (Miq.) Nakai] is a perennial, rhizomatous, dwarf bamboo to ca. 1 m tall, but often less, that is native to Japan (Ohwi 1965; Bailey & Bailey 1976; Suzuki 1978; Zhu & Stapleton 2006). This species previously was not documented from the Arkansas flora (Smith 1994; Gentry et al. 2013; Weakley 2024), although it sometimes is cultivated in the state (James Peck, pers. comm. 2024); nor was it treated in Flora of North America (Stapleton 2007). It is, however, known from the naturalized floras of a few other states in the eastern USA, including Florida, Maryland, New York, Pennsylvania, and Virginia, along with the District of Columbia (Steury et al. 2013; Kartesz 2015; SERNEC 2024; Weakley 2024; Wunderlin et al. 2024). Based on its aggressive nature, as observed in Arkansas, *P. fortunei* should be expected elsewhere in the state's flora, especially in the vicinity of where plants of the species are cultivated.

## ADDITIONS TO THE ARKANSAS FLORA

***Pleioblastus fortunei*** (Van Houtte) Nakai (pygmy bamboo) is reported here for the first naturalized occurrence in the Arkansas flora, from Columbia County. In 2024, a large, expansive naturalized population of *P. fortunei* was discovered growing along the banks of a small, intermittent stream in highly disturbed riparian habitat, within the city of Magnolia and adjacent to a large residential area (Figs. 1–4). Plants were sterile, although spreading and establishing aggressively via rhizomes. The precise origin of the naturalized plants is uncertain; however, a residence bordering the location had a large colony of *P. fortunei* present over much of the property, which likely spread from initially cultivated plants and subsequently founded the naturalized population. Our record of *P. fortunei* from Arkansas, apparently, is the first documented occurrence of this species outside of cultivation west of the Mississippi River.



FIG. 1. Naturalized plants of *Pleioblastus fortunei* in Columbia Co., Arkansas. Many hundreds of plants/rhizomatous offsets were present along steep bank and edge of streambed in a highly disturbed riparian zone, within the City of Magnolia. Plants were sterile and establishing aggressively via rhizomes. While equivocal, the presumed source of the naturalized *P. fortunei* plants is once cultivated plants present at a residence that borders the riparian zone—these plants had spread throughout much of the property and likely into the adjacent riparian zone establishing the naturalized population. In some places, plants were colonizing steep streambanks down to the edge of the waterline as shown. Although most plants occurred along streambanks, some also were present in the stream bed adjacent to the waterline. The boundaries of the naturalized population extend considerably beyond what is shown in the photograph.



FIG. 2. Close-up of naturalized plants of *Pleioblastus fortunei* in Columbia Co., Arkansas. Small portion of the naturalized colony showing close-up of leaves and stems. Plants within the riparian zone overall were taller and more robust than those escaped at the adjacent residence—this may be because of the higher moisture levels and likely elevated nutrient availability associated to the drainage site.



FIG. 3. County distribution of naturalized *Pleioblastus fortunei* in Arkansas.

Voucher specimen. **U.S.A. Arkansas. Columbia Co.:** Magnolia, immediately W/SW of intersection of Sue St. and Dogwood St., 33.2857091, -93.2276976, large expansive population of many hundreds of plants/rhizomatous offsets present along the banks and bed of intermittent stream in highly disturbed, urban riparian zone, plants sterile and spreading via rhizomes, 19 Jul 2024, Serviss 8820 (ANHC, HEND).

The synonym *P. pygmaeus* frequently is used for *P. fortunei* in botanical literature. Zhu and Stapleton (2006) and Weakley (2024) both list *P. pygmaeus* as a synonym of *P. fortunei*—*Pleioblastus fortunei* (Van Houtte) Nakai, published in 1863 based on Van Houtte's name, predates *P. pygmaeus* (Miq.) Nakai, which was published in 1866 by Miquel. However, there is an older name, *Pleioblastus variegatus* (J. Dix) Makino, which is based on J Dix's 1861 name, that appears to be the oldest name for the species and likely should be considered the correct name for this taxon (John Kartesz, pers. comm. 2025), although *P. variegatus* (J. Dix) Makino should not be confused with *P. variegatus* Siebold ex Miq., based on Siebold ex Miq. 1886, which is superfluous.

In the Arkansas flora, *P. fortunei* possibly could be confused with juvenile plants of the native *Arundinaria gigantea* (Walt.) Muhl. or one of the introduced *Phyllostachys* species; however, its diminutive size of usually 1 m or less tall, clearly distinguishes it from Arkansas species in these genera, which generally are several meters in height at maturity.



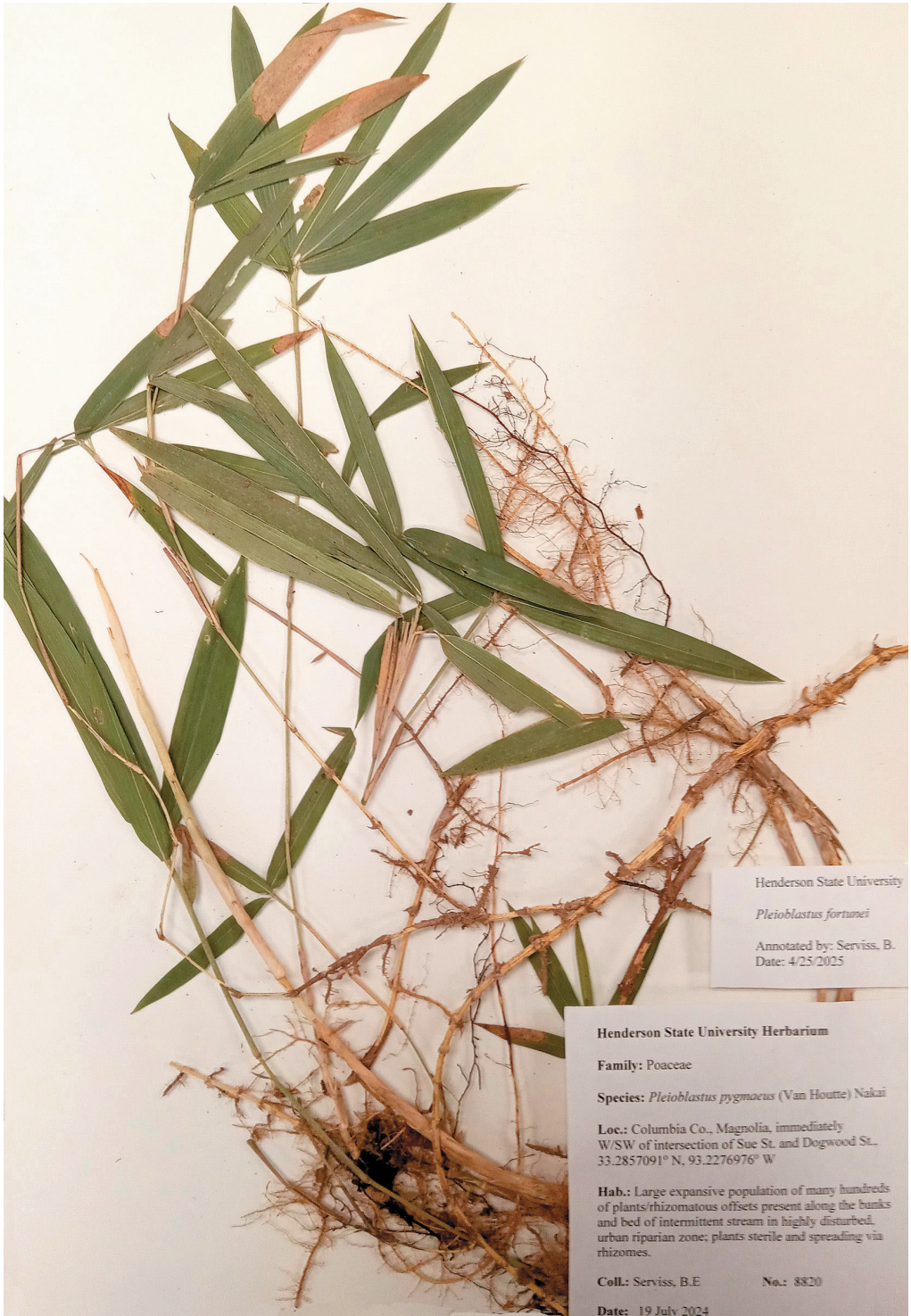


FIG. 4. Columbia County specimen of *Pleioblastus fortunei*.

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