

CLERODENDRUM (LAMIACEAE) IN THE ARKANSAS FLORA

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ABSTRACT

Clerodendrum trichotomum Thunb. is reported here as new to the Arkansas flora. This represents the first documented occurrence of the genus *Clerodendrum* outside of cultivation in the state. One, large colony of escaped/naturalized plants of *C. trichotomum* was discovered growing at an expansive dumpsite for horticultural waste and edge of adjacent greenbelt in Clark County. Photographs of *C. trichotomum*, including plants in habitat, along with notes on *Clerodendrum* in Arkansas, are provided.

In 2009, escaped plants of *Clerodendrum trichotomum* Thunb. (harlequin glorybower) were documented at a large dumpsite for horticultural waste in the city of Arkadelphia in Clark County, Arkansas. The origin of the escaped *C. trichotomum* population is presumed to be from horticultural discards, with subsequent establishment. Over the past nine years, plants have increased in number, where at present (2018), a large, presumably clonally established population of *C. trichotomum*, consisting of several dozen stems/plants, ranging from less than 1 m to ca. 4–5 m in height, are present at the dumpsite and along the edge of an adjacent greenbelt; a number of the plants had mature fruits (Figs. 1–2). Although reproductive, spread appeared to be mostly or completely via root suckering. No *C. trichotomum* plants were observed in the disturbed woods that borders the site. This record represents the first documented occurrence of the genus *Clerodendrum* in the state's flora outside of cultivation. In addition to *C. trichotomum*, a number of other non-native, angiosperm species were present at or in the immediate vicinity of the site, including *Ilex cornuta* (Chinese holly), *Lagerstroemia indica* (crepe myrtle), *Ligustrum sinense* (Chinese privet), *Liriope spicata* (creeping lilyturf), *Nandina domestica* (nandina), *Perilla frutescens* (beefsteak-plant), *Photina serratifolia* (Chinese photina), *Triadica sebifera* (Chinese tallow tree), and *Wisteria sinensis* (Chinese wisteria).

Voucher specimen. Arkansas. Clark Co.: Large colony of escaped/naturalized plants, consisting of several dozen stems, ranging from less than 1 m to small trees ca. 4–5 m tall, some plants with mature fruits, at edge of large dumpsite for horticultural waste and adjacent greenbelt, off M.H. Russell Dr., in proximity (N/NW) of intersection of M.H. Russell Dr. and 10th St., Arkadelphia, 14 Sep 2018, *Serviss 8623* (HEND).



Figure 1. *Clerodendrum trichotomum* naturalized in Clark Co., Arkansas. A portion of the colony (in 2018), which has increased in size considerably over the previous nine years since its initial discovery in 2009.



Figure 2. *Clerodendrum trichotomum* plant and habit. (A) Stems and leaves of naturalized plants from Clark County. (B) Close-up view of mature fruits from naturalized plants; several plants at the Clark County site had mature fruits. (C) Flowers (from a cultivated plant of *C. trichotomum*).

Clerodendrum trichotomum is a large, colonial, deciduous shrub or small tree to 10 m that is native to China and Japan (Bailey & Bailey 1976; Krüssmann 1976; Chen & Gilbert 1994). This species is grown for its showy, sweetly-fragrant flowers and colorful fruits. *Clerodendrum trichotomum* sometimes is cultivated in the southern USA, including Arkansas, and previously has been reported as a component of the naturalized floras of Alabama, Florida, Georgia, Louisiana, and North Carolina (Poindexter et al. 2011; Wunderlin and Hansen 2011; Kartesz 2015; Weakley 2015; Keener et al. 2018; USDA, NRCS 2018). *Clerodendrum trichotomum* aggressively spreads via root suckers, with plants forming large clonal stands over time. Root suckers sometimes are produced a distance of several meters from the original plant. Seed production, however, also occurs (observed in Arkansas plants of *C. trichotomum*) and may contribute to naturalization.

A morphologically similar species, *Clerodendrum bungei* (rose glorybower), is a small, colonial, deciduous shrub to 1–2(–2.5) m tall that is native to China (Bailey & Bailey 1976; Krüssmann 1976; Chen & Gilbert 1994) and also cultivated in Arkansas. This species aggressively spreads via suckering, as does *C. trichotomum*, to form extensive stands of plants (Fig. 3). Although not currently documented outside of cultivation in the state’s flora, it should be expected as escaped or naturalized in proximity to where plants of the species are cultivated. *Clerodendrum bungei* has been documented in the floras of many states in the southeastern USA (Kartesz 2015; Weakley 2015) and should be expected outside of cultivation in Arkansas.

The two species of *Clerodendrum* may be distinguished reliably using the following key:

- 1. Plants to 10 m tall, becoming arborescent; leaf margins often entire, sometimes toothed; flowers white to whitish-cream, calyx 10 mm or more in length **Clerodendrum trichotomum**
- 1. Plants generally 1–2(–2.5) m tall with little to no branching of stems; leaf margins with large, serrate teeth; flowers rose-pink, calyx 8 mm or less in length **Clerodendrum bungei**



Figure 3. *Clerodendrum bungei* plant and habit for comparison with *C. trichotomum* (from cultivated plants in Arkansas). (A) Plants/clones showing suckering and colonial habit. (B) Flowers. (C) Mature fruits.

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