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HOSTA LANCIFOLIA (LILIACEAE): A NEW GENUS AND SPECIES FOR THE ARKANSAS FLORA

BRETT E. SERVISS
Biology Department
Box H–7570
Henderson State University
1100 Henderson Street
Arkadelphia, Arkansas 71999
servisb@hsu.edu

JAMES H. PECK
P.O. Box 705
Cedar Key, Florida 32625
james.peckck@gmail.com

ABSTRACT

Hosta lancifolia Engl. is reported here as new (genus and species) to the naturalized Arkansas flora. Several plants of *H. lancifolia* were discovered growing on the slope of a ravine in disturbed, urban woods in Pulaski County at a site surrounded by residential areas. A photograph of the voucher specimen is provided.

Hosta is a genus of about 40–45 species of herbaceous, rhizomatous, perennial herbs of Asiatic origin, with most species native to Japan (Bailey & Bailey 1976; Chen & Boufford 2000; Utech 2002). Many species, including *H. lancifolia*, are highly regarded as ornamentals in temperate shade gardens for their showy flowers, attractive, often variegated foliage, high shade tolerance, and general ease of cultivation (Bailey 1949; Bailey & Bailey 1976; Chung & Jones 1989). Although horticultural purposes are the principal use of the genus, the leaves of some species are eaten in Japan and Korea (Utech 2002). Species delimitation in *Hosta* is problematic, because of centuries–long cultivation, along with extensive hybridization and horticultural selection. Well over 1000 cultivars have been recorded (Schmid 1991; Utech 2002).

Hosta lancifolia Engl. (narrow–leaf plantain lily) is a mounding or clumping, herbaceous perennial that reaches a height of 35–60 cm; it produces short, sometimes stoloniferous rhizomes. It is native to Japan (Utech 2002; Aniśko 2008) but is cultivated worldwide and is one of the more frequently grown species of *Hosta* in the USA (Bailey 1949; Utech 2002). *Hosta lancifolia* makes an excellent ground cover because of its dense, glossy foliage, vigorous vegetative growth, and high shade tolerance (Utech 2002; Aniśko 2008). It prefers moist, mildly acidic soils with high humus content (Aniśko 2008) but tolerates drier conditions than most other *Hosta* species and full sun exposure if soils are consistently moist (Aniśko 2008).

Hosta lancifolia has been documented outside of cultivation in a number of eastern states, including Connecticut, Maryland, Illinois, Massachusetts, New Jersey, New York, North Carolina, Ohio, Pennsylvania, and Rhode Island (Utech 2002; Kartesz 2015; Weakley 2015; USDA, NRCS 2016). It sometimes persists subsequent to cultivation practices and may spread asexually via stoloniferous rhizomes (Utech 2002). When naturalized, it typically occurs in highly disturbed habitats, such as urban woods and green belts, roadsides, lawns, and open waste places (Mohlenbrock 1986; Rhoads & Klein 1993; Broderick 1997; Utech 2002). Escape and subsequent naturalization by *H. lancifolia* is probably exclusively accomplished via asexual means, as plants are generally sterile and rarely, if ever, develop mature fruits (Utech 2002). *Hosta lancifolia* is believed to be of garden

origin and wild populations not directly or indirectly associated with anthropogenic activities probably do not exist (Schmid 1991; Aniśko 2008).

In 2002, naturalized plants of *Hosta lancifolia* were documented on a slope of a wooded ravine in highly disturbed, urban woods in Pulaski County (Fig. 1). The site is surrounded by residential areas. Plants were reproductive with well–developed inflorescences. The precise origin of the naturalized *H. lancifolia* plants is unknown, but evidence of spread and establishment, probably via rhizomes, was evident. A second occurrence of escaped/naturalized *Hosta* from Pulaski County also was documented in 2002 (*Peck 2002120*); however, unequivocal identification to species is problematic, as the voucher specimen consists of sterile material—a single, variegated leaf.

Figure 1. Voucher specimen of *Hosta lancifolia* from Pulaski Co., Arkansas.

Based on its frequency of cultivation, *Hosta lancifolia* should be expected as adventive or escaped elsewhere in Arkansas in low quality, highly disturbed environments, particularly in urban natural areas adjacent to where plants of the species are cultivated or persisting or in places where horticultural discards are deposited.

Voucher specimens. **Arkansas**. Pulaski Co.: Six plants scattered in deciduous forest along wooded ravine, all flowering, no indication of planting; an escaped plant, seeding in other plants; more than a waif, Boyle Park, Little Rock, 27 Sep 2002, *Peck 2002157* (HEND); a few plants scattered in deciduous forest on bluff above Murray Park adjacent to Arkansas River, an escaped species seeding in other plants; more than a waif, Cantrell Hill W of downtown, Little Rock, 20 Sep 2002, *Peck 2002120* (HEND).

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