

***ASPIDISTRA ELATIOR* (RUSCACEAE) NEW FOR THE ARKANSAS FLORA**

BRETT E. SERVISS

Department of Biological Sciences
Henderson State University
Arkadelphia, Arkansas 71999
servisb@hsu.edu

JONATHAN W. HARDAGE

Bismarck, Arkansas 71929
jh201098@reddies.hsu.edu

FAYE C. WARD

100 Caddo Street
Arkadelphia, Arkansas 71923
fayecallanward@gmail.com

R. TOBIN FULMER

320 N 9th Street
Arkadelphia, Arkansas 71923
frogman1975@yahoo.com

LYDIA I. SERVISS

Henderson State University
Arkadelphia, Arkansas 71999

JAMES H. PECK

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

ABSTRACT

Aspidistra elatior is reported here for the first occurrence outside of cultivation in Arkansas. Escaped plants of *A. elatior* are documented from Union County and were present as two colonies growing along the upper bank of a small stream in a highly disturbed, urban greenbelt in the city of El Dorado. This record of *A. elatior* marks the first occurrence of the genus *Aspidistra* in the state's naturalized flora and the fourth documented occurrence of this species outside of cultivation in the USA. Photographs of *A. elatior* in habitat and keys to identification of the genera of Ruscaceae currently known from the Arkansas flora are provided.

In 2019, two colonies of escaped plants of *Aspidistra elatior* Blume (cast-iron plant) were documented from Union County in Arkansas (Figs. 1–2). This genus and species previously have not been documented in the Arkansas flora outside of cultivation (Smith 1994; Arkansas Vascular Flora Committee 2006; Gentry et al. 2013). The escaped colonies of *A. elatior* occurred toward the top of a steep bank of a small stream in a highly disturbed, urban greenbelt within the city of El Dorado, Arkansas. Each colony consisted of multiple plants/clones. Much of the greenbelt is surrounded by residential areas, with homesites bordering the areas where the *A. elatior* plants occurred. No cultivated plants of *A. elatior* were observed in the vicinity of the escaped plants. Although their origin is unknown, establishment is presumed to be via *A. elatior* plants discarded as horticultural waste or from propagules (plants, rhizome segments, or seeds) distributed to and subsequently deposited at the sites by stream water. It also is possible that one or both colonies may have originated from plants persisting from cultivation practices; however, no obvious evidence of prior cultivation was observed. Establishment and spread of plants within the colonies appeared to be mostly vegetative by rhizomatous offsets; one plant in one of the colonies had a single, immature fruit (Fig. 2); hence, some spread via seeds also is plausible.



Figure 1. (A–B) *Aspidistra elatior* escaped in Union Co., Arkansas. Both colonies of plants shown were present along a stream in a highly disturbed riparian zone of an urban greenbelt. Plants in A and B were separated by several meters.



Figure 2. (A–B) *Aspidistra elatior* escaped in Union Co., Arkansas. A. Colony (same as Fig. 1A) with fruit-bearing plant of *A. elatior* — this plant was at the lower edge of the colony (downslope and closest to the stream — indicated by the yellow arrow); it was the only plant observed with reproductive structures. B. Close-up view of fruit.

Voucher specimens. Arkansas. Union Co.: El Dorado, W/NW of intersection of Briarwood Dr. and Crestwood Dr., two colonies of escaped plants at top of steep stream bank in highly disturbed, urban greenbelt and riparian zone, each colony consisting of numerous plants/clones from rhizomatous offsets, one plant/clone with fruit, 31 Aug 2019, *Serviss 8701A, 8701B* (HEND).

Aspidistra elatior is a rhizomatous perennial that probably is native to Japan (Liang & Tamura 2000). It sometimes is cultivated in the USA and elsewhere as an accent or border plant because of its evergreen habit and ease of cultivation — *A. elatior* is tolerant of a wide range of conditions, including low light and poor soils, and may persist even under neglect (Bailey & Bailey 1976). *Aspidistra elatior* previously only has been documented in the USA from Alabama, Florida, and South Carolina (Payne 2010; Barger et al. 2012; Kartesz 2015; Franck et al. 2016; Keener et al. 2019), making our record, apparently, only the fourth documented occurrence of this species outside of cultivation in the USA. *Aspidistra* was not included in the Flora of North America treatment for the Liliaceae (Utech 2002).

Based on the discovery of *Aspidistra elatior* in Arkansas, the Ruscaceae family currently is represented by five genera and nine species in the state — species of *Maianthemum* and *Polygonatum* are native; the remaining taxa in the family are non-native. Arkansas genera of Ruscaceae may be distinguished reliably using the following key (for keys and descriptions of the species of *Liriope* and *Ophiopogon* that are known from the Arkansas flora, see Serviss et al. 2016a and 2016b).

1. Plants caulescent with obvious aerial stems bearing leaves.
 2. Inflorescences terminal; perianth segments separate **Maianthemum**
 2. Inflorescences axillary; perianth segments united **Polygonatum**
1. Plants acaulescent without obvious aerial stems bearing leaves (the clustered leaf sheaths of *Convallaria* may appear as stems).
 3. Leaves deciduous, 30 cm or less long and ca 2.5–7.6 cm wide; flowers pendulous, arranged in one-sided racemes; perianth white or rarely pink and broadly campanulate **Convallaria**
 3. Leaves evergreen and leathery, at least some of them longer than 30 cm, or if less than 30 cm, also less than 2(–2.5) cm wide; flowers straight or recurved (in *Ophiopogon*), solitary and perianth purple to dark purple or rarely pink, or flowers in racemes and perianth purple, lavender, violet, pink, or white, and not campanulate.
 4. Leaves wider than 5 cm, broadly elliptic to oblong-elliptic; flowers solitary **Aspidistra**
 4. Leaves less than 3 cm wide, lanceolate to linear; flowers in racemes.
 5. Pedicels of flowers recurved; flowers perigynous or epigynous; fruits (sarcotestas) bright blue **Ophiopogon**
 5. Pedicels of flowers straight; flowers epigynous; fruits (sarcotestas) black to dark blackish-blue **Liriope**

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