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EULOPHIA GRAMINEA (ORCHIDACEAE) NATURALIZED IN TEXAS

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ABSTRACT

Eulophia graminea is reported here, based on photographic evidence, as naturally occurring in an urban landscape in Houston, Texas. It is the first report of the species from Texas and only the second from the USA.

Eulophia graminea (Orchidaceae) is a terrestrial orchid native to Asia discovered growing in mulched landscapes in Miami-Dade Co., Florida (Pemberton at al. 2008), its first known occurrence in the USA. It now has spread to a number of Florida counties (Kartez 2020; USDA, NRCS 2020). This orchid has a known natural distribution from Sri Lanka and India to China, the Ryuku Islands in Japan, and throughout most of southeast Asia, including Singapore (Keng et al. 1998). It is considered naturalized and weedy in Australia (Macrae 2020). Habitats of the species include maritime hammocks, e.g. coastal beaches, grasslands, roadsides, and other open areas at lower elevations (Ang et al. 2011).

The orchid was recently discovered in Texas in an urban landscape in northwest Houston, Harris County, Texas, documented here by photos taken of the naturalized population. Arrangements are being made for collection of a voucher (to be placed at BAYLU) during the next flowering period.

Texas. Harris Co.: Northwest Houston, NW corner of Beltway 8 (Sam Houston Parkway/Tollway) and Hwy 249, 2 mi SE of Willowbrook, ca. 2 mi ESE of Sam Houston Race Park, 9 Aug 2020, photos by Kelly Sennhauser. Figs. 1-3.

Eulophia graminea was found in Texas in June 2019 as scatted individuals and in clusters in an urban/garden woodlot in openings between native loblolly pine and water oak and introduced urban landscape plantings. The orchid grows in leaf litter and pine straw and among colonies of *Carex cherokeensis*. Other associated species include *Calyptocarpus vialis*, *Celtis laevigata*, *Commelina erecta*, *Crinum americanum*, *Cyperus* sp., *Diodia virginiana*, *Euphorbia cyathophora*, *Ilex vomitoria*, *Solidago sp.*, and *Stenotaphrum secundatum*.

Flowering was over in June and the plants had produced capsules. Mature individuals have large pseudobulbs (Fig. 2) and in August, one pseudobulb of those observed in June produced flowers (Figs. 1, 3). The landowner, a member of the Houston Orchid Society, recognized the plant as an orchid and photos were sent to the authors, who determined the species to be *Eulophia graminea*.

During February 2020, what appears to be initiation of flower stalks (bolting) from one of the pseudobulbs indicates that the orchid is initiating flowering, which should occur in summer 2020.

Figure 1. *Eulophia graminea*, Harris Co., Texas. Photo by Kelly Sennhauser, 9 August 2020 (used with permission).

Figure 2. Pseudobulb of *Eulophia graminea*, Harris Co., Texas. Photo by Kelly Sennhauser, 9 August 2020 (used with permission).

Figure 3. Flower of *Eulophia graminea*, Harris Co., Texas. Photo by Kelly Sennhauser, 9 August 2020 (used with permission).

A brief description and color photos of *Eulophia graminea* are provided by the North American Orchid Conservation Center (2020). This species is self-compatible and considered to have potential to spread by airborne seeds and by pseudobulbs transported in mulch, soil, and in plantings of other orchids (Pemberton et al. 2008). In Florida "*Eulophia graminea* forms a dense monoculture and is now found in rockland hammock and pine rockland habitats and cypress strands, growing in rock, sand, mulch, and bare earth. [It has] potential to become an invasive plant. ... Its native range has colder temperatures than Florida, suggesting it may spread northward" (North American Orchid Conservation Center 2020).

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