An Exotic Orchid, *Eulophia graminea*, Invades Charlotte County

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**Additional index words.** mycorrhizal, pseudobulbs, naturalize, cryptic, raceme

When we speak of exotic invasive plants, we often think of those that take over habitat, replace native vegetation, or fill an open niche. One such plant has quietly crept into several mulched landscape beds in parts of Charlotte County, Florida. This orchid, *Eulophia graminea*, is a type of ground orchid native to tropical and subtropical Asia where it can be found in a variety of habitats. It first showed up in Miami in 2007 and in Lee County in 2011, probably as a result of an escape from an orchid collector. *E. graminea* appears to favor mulched landscape beds in sunny locations. One specimen was found in a mulched palm collection at the Charlotte County Extension Demonstration Garden in Port Charlotte, and many more have been discovered throughout Charlotte County. The bulk of this plant is made up of a pseudobulb, a storage organ often associated with orchids. From this pseudobulb appear up to five short, strap-like leaves. At maturity this orchid produces tall racemes of small flowers. The flowers are not very attractive—a little white with pink and green—and seed pods eventually develop, producing tiny seeds. Orchids reproduce via pseudobulbs and dust-like seeds that can travel in the wind. This is probably how they have spread throughout our area. A brief observational study of this cryptic orchid will provide an overview of its invasive potential and biology.

This ground orchid is botanically identified as *Eulophia graminea*, a type of ground orchid sometimes called “The Beautiful Crown Orchid” or Mei Guan Lan in Chinese. Originally found in tropical and subtropical parts of Asia, including Pakistan, India, Nepal, southern China, and the Ryuku Islands south of Japan, it grows in grasslands, beaches, and other open habitats. Orchid enthusiasts may have accidentally introduced *E. graminea* into Florida. The orchid was first discovered in Miami in 2007, and then in Lee County in 2011. From there it continued to expand its territory. When residents began bringing samples into the Charlotte County Extension office for identification in 2012 and 2013, the author found some reference information provided by Horticulture Agent Stephen Brown with Lee County Extension, who assisted with its identification. Further investigation found that Okeechobee County Extension Agent Dan Culbert had also encountered this plant. Up to seven sites were found infested with this orchid, so a brief study of its biology and naturalization in both urban and natural areas was undertaken.

**Discussion**

This ground orchid is normally found in mulched landscape beds in full sun locations. Most of the ones found by the author in Charlotte County have been associated with mulched beds mostly in commercial settings. However, one *E. graminea* was actually found in a mulched palm collection at the Charlotte County Extension Office Demonstration Garden in Port Charlotte. One specimen was collected in a natural area in a pine flatwoods habitat. At first glance, this orchid appears as if it were a relative of the amaryllis, as it has a thick bulb-like base. The short, lily-like leaves almost reminded the observer of daylily leaves. However, if you look closer you will notice that the bulb is actually what is called a pseudobulb (Fig. 1), a storage organ often associated with orchids. From this pseudobulb (which often sticks partway out of the mulch), appear up to five short, strap-like leaves (Fig. 2). At maturity this orchid produces a long shoot (up to several feet tall) with a raceme of small flowers. The flowers are not much bigger than a pencil eraser and are not very attractive (Fig. 3)—a little white with pink and green. If pollinated, seed pods eventually develop producing tiny, dust-like seeds. This seems to be a common occurrence as the author has seen and collected specimens with both mature and immature seed pods. The mature seed pods eventually open up and disperse the minute seeds...
on currents of air. The literature indicated that some non-native orchids have difficulty encountering a suitable pollinator and the required mycorrhizal fungi for germination, but this has not been a problem for \textit{E. graminea}, which in addition to spreading by pseudobulbs seems to have found an adequate pollinator and the ideal conditions to develop fertile seeds.

\section*{Conclusions}

A total of seven sites in Charlotte County have been found inhabited by \textit{E. graminea}. With this orchid reported to be found in pine rockland habitat in Everglades National Park (Miami–Dade County), pine flatwoods habitat next to the Big Cypress National Preserve (Collier County) and on up the peninsula, \textit{E. graminea} will likely continue to move north through Florida. The literature suggests that it will invade at least as far as Georgia and Alabama due to its hardy nature. It is likely that it is here to stay and that eradication efforts would be futile. The best control recommendation for homeowners is hand-removal especially before it flowers.

\section*{Literature Cited}


Hammer, R. 17360 Avocado Drive, Homestead FL 33030 – Personal Communication.

