
The Palmetto

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Florida Butterfly Orchid

by Elizabeth Smith

"Hardly can a forest or hammock in southern Florida be entered without soon encountering one of these plants," writes Dr. Carlyle A. Luer about the Florida butterfly orchid in his wonderful compilation, *The Native Orchids of Florida*.

The butterfly orchid, *Encyclia tampensis* (also *Epidendrum tampense*), is one of the most common epiphytic orchids, found throughout peninsular Florida from the north-central region to the Keys (one of the few orchids found in the Keys) and the Bahamas. It thrives in a wide variety of conditions, tolerating dark swamps or sunny, open, dry forests, and grows on many different trees - pines, cypresses, gumbo-limbo, cedars, oaks, and palms.

When I see a panicle of these beautiful small flowers suspended overhead, I am reminded of the common name and can see their resemblance to a cloud of tiny white and pink butterflies. The more scientifically minded claim that the name comes from the occasional butterfly attracted by the sweet fragrance of the flower, although this species is actually pollinated by small bees. The orchid attracts diurnal (daytime) pollinators, and its scent is strongest from mid-morning to afternoon.

The genus name, *Encyclia*, is from the Greek word meaning "to encircle", and refers to the sides of the flower's lip, which curve upward and encircle the column. The column is a specialized structure in orchids that is a union (to different degrees) of stamens, style, and



stigma. *Encyclia* is often classified as a section within the genus *Epidendrum*, although many botanists feel that *Encyclia* has enough characteristics to distinguish it as a separate group.

The species name *tampensis* describes the first recorded location of discovery near Tampa Bay. Most descriptions state that *Encyclia tampensis* was first collected in the Tampa Bay area by John Torrey in 1846, who then sent specimens to John Lindley in England for his study and classification. John Beckner, of the Orchid Identification Center at Marie Selby Botanical Gardens in Sarasota, tells

us that this could not be true, because John Torrey was reported to be in Florida not until 25 years later in 1871, and then only along the northern border. It is more likely that army doctors and others in the Tampa Bay area sent specimens to Torrey in New York prior to 1847, who then forwarded them on to Lindley.

The classification and description of *Encyclia tampensis* was written up in *The Botanical Register* in 1847, but the orchid may have been collected much earlier; and preserved specimens kept in Tampa, New York, or England may have languished on desks, shelves, or ships before Dr. Lindley received them. Constant editing and condensing by historians and writers have passed along the idea that *Encyclia tampensis* was collected in Tampa by John Torrey, when the credit belongs to an unknown botanist or enthusiast who sent it to Torrey nearly 150 years ago. The original holotype (specimen) of that butterfly orchid is still preserved in the London Museum.

John Beckner also recounts that dried pseudobulbs were found in an archaeological dig near Ft. Pierce. The bulbs were part of the garbage remains of a shipwreck camp dating from the 1600s. It is thought that the survivors gathered them for food, but found them unpalatable and threw them out.

It is also reported that American Indians collected the pseudobulbs for food, and that the larger bulbs are sometimes gnawed on by animals, possibly in an attempt to get water.

The numerous roots anchor the pear-shaped or ovoid pseudobulbs (not true bulbs at all, but the thickened portion of the stem) to the tree. The pseudobulbs are a dull to shiny green, sometimes streaked with purple, often enclosed in the remnants of papery sheaths, 1 to 7 cm long and 1 to 2.6 cm wide. One to three rigid, linear-lanceolate leaves, up to 40 cm long and 2 cm wide, emerge from the top of the pseudobulb.

Blooming period is mostly during the spring and summer, but can occur throughout the year. The flower spike grows from between the leaves to a length of up to 76 cm, bearing a loose particle of as many as 45 blooms. The sepals and petals are similar in shape and vary in color from yellow-green to green, streaked with purple or brown. The white lip is deeply lobed with a magenta to purple

splotch or streaks in the center. The butterfly orchid is reported to be highly variable in the color and size of flowers; there are even several albino varieties. Win Turner, Florida native and Naples resident, remembers finding a white butterfly orchid in an old cypress dome where the Collier County complex now exists in east Naples. Some of the white-lipped forms are available commercially.

The fruit is a hanging capsule, ellipsoid in shape, 3 by 1.5 cm, and, when mature, splits into three "valves" to allow the wind to disperse the tiny, dustlike seeds.

Even though this is one of our hardier native orchids that can withstand a freeze, hard freezes and mealy bug infestation have been responsible for population declines, but they are reportedly

recovering. *Encyclia tam-pensis* also responds well to culture and has long-lasting flowers - desirable features that contribute to its over-collection and to its becoming a threat-ened species.

[This species has subsequently been removed from the FDACS threatened plant list at the recommendation of the Endangered Plant Advisory Council. At the current time, 2002, this species is not considered to be threatened - ed.].

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<http://www.fnps.org/palmetto/v15i2p3Smith.pdf> (19 October, 2002).

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Characteristics of Xyris Species in Florida Wetlands

| SCIENTIFIC NAME | DISTRIBUTION | STEM HEIGHT | LEAF LENGTH | LEAF WIDTH | FLOWERING TIME | SPIKE SHAPE | SPIKE LENGTH | SEED LENGTH |
|---|----------------|--------------|--|------------|----------------|----------------------------|--------------|-------------|
| <i>Xyris ambigua</i> | All of FL | 70-100cm | 10-40-60cm | 2-7mm | Jun-Aug am | ovoid to ellipsoid | 1-2.5cm | 0.5-0.6mm |
| Savannahs, wet pinelands, and ditches. | | | Plants clustered, scape twisted, leaves slender. | | | | | |
| <i>Xyris baldwiniana</i> | Peninsular FL | 20-60cm | 10-30cm | 0.5-.2mm | May-Jun am | ovoid/ellipsoid | 1.5-2.5cm | 1mm |
| Savannahs, pinelands, and ditches. | | | Leaves not filiform. | | | | | |
| <i>Xyris brevifolia</i> | All of FL | 8-40cm | 2-6cm | 0.5-.2mm | Spr-Fall am | subglobose | 4-6mm | 0.3-0.4mm |
| Disturbed sandy, moist areas and pinelands. | | | Bracts purple margined, jagged margin, sepal pimplelike. | | | | | |
| <i>Xyris caroliniana</i> | All of FL | 10-70cm | 20-50cm | 2-5mm | Jun-Sept pm | elliptic to obtuse | 1.3-3.0cm | 0.8-1.0mm |
| Savannahs, wet depressions, and swamps. | | | Smooth scape ridges; leaf base bulbous. | | | | | |
| <i>Xyris chapmanii</i> | W Panhandle | 4.5-9.5dm | 47-58cm | 1.5-2.4mm | Aug-Sept am | - | 6-11mm | 0.6-0.8mm |
| Deep muck & seepage bogs in Calhoun County. | | | Rare; leaf base not noticeably expanded, leaves smooth. | | | | | |
| <i>Xyris difformis</i> var. <i>curtissii</i> | All of FL | 15-70cm | 20-50cm | 3-14mm | May-Sept am | ovoid | 12-18mm | 0.5mm |
| Sandy peat: ditches, flatwoods; acid seep areas. | | | Few leaves, scape twisted, two-edged; seeds translucent. | | | | | |
| <i>Xyris difformis</i> var. <i>difformis</i> | Panhandle/N FL | - | 10-50cm | 0.5-1.5cm | Spr-Fall | relatively broad, not flat | 1cm | - |
| Wet sands, flatwoods, lake/pond margins, Nassau & Marion Cos. | | | Oval scape; scape ridges more than three. | | | | | |
| <i>Xyris difformis</i> var. <i>floridana</i> | All of FL | 10-30-50cm | 15-70cm | 1.5-6.0mm | All year am | broadly ovoid | 1.0-1.5cm | <0.5mm |
| Sandy peats of ditches & pine flatwoods; roadsides. | | | Tufts or solitary; scape twisted below, three to seven ridges, pink base. | | | | | |
| <i>Xyris drummondii</i> | NW FL | 4-20cm | 3-8(10)cm | 1.5-5.0mm | Jun-Jul am | lance-ovoid | - | 0.3-0.4mm |
| Coastal flatwoods, disturbed lowlands, and bogs. | | | In tufts. Leaf with brown patch at base; scape two edged. | | | | | |
| <i>Xyris elliptica</i> | All of FL | 20-70cm | 5-10-30cm | 1.5-2.5mm | May-Jul am | ovoid | 7-9mm | 0.5-0.6mm |
| Savannahs, pineland pond margins, and ditches. | | | Leaves numerous, flat, often twisted, two edged. | | | | | |
| <i>Xyris fimbriata</i> | Most of FL | 60-80-150cm | 4-70cm | 0.5-2.5cm | Jul-Sept am | ovoid or ellipsoid | 1.5-2.5cm | 0.8-1mm |
| Pond margins, wet sandy ditches, wet pinelands. | | | Solitary or small tufts; scape ridges two edged twisted rough. | | | | | |
| <i>Xyris flabeliformis</i> | All of FL | 30cm | 1-4cm | 1-3mm | Apr-May am | ovoid or ellipsoid | 4.8-10mm | 0.3mm |
| Savannahs, wet ditches, and pine flatwoods. | | | Leaves spread into fan shape; scape two edged, light color bract. | | | | | |
| <i>Xyris indifolia</i> | NW FL | 40-70-(10)cm | 6-10-20mm | 2-15mm | Jul-Sept am | ellipsoid or cylindrical | 1.5-3.5cm | 0.8-1.0mm |
| Freshwater marsh, pond margins, wet depressions. | | | Leaves few, linear, scape one edged below and two edged above. | | | | | |
| <i>Xyris isoetifolia</i> | NW FL | 15-30cm | 4-15cm | 2mm | July am | ellipsoid | 5-7mm | <0.5mm |
| Savannah bogs and flatwood pond-lake margins. | | | Similar to <i>Xyris baldwiniana</i> ; Bay and Washington Counties only. | | | | | |
| <i>Xyris jupicai</i> | All of FL | 20-70-90cm | 10-60cm | 1-5-10mm | Jul-Oct am | ovoid, ellipsoid, oblong | 5-15mm | 4-5mm |
| Bogs, cypress swamps, lake-pond margins. | | | Short-lived coastal perennial; scape one-two edged above. | | | | | |
| <i>Xyris longisepala</i> | NW FL | 30-40-82cm | 6-8-25cm | 1-2mm | Aug-Oct pm | ellipsoid to oblong | 1.0-1.6cm | 0.4-0.5mm |
| Margins of sandhill sinkhole ponds, four known locations. | | | In association with <i>X. jupicai</i> and <i>X. isoetifolia</i> in moist sand. | | | | | |
| <i>Xyris louisianica</i> | Panhandle | - | 15-30cm | 2-5mm | Sum-Fall | ovoid to elliptic | 1.5cm-2.0 | 0.5-0.7mm |
| Ditches, swales, wet depressions; East Gulf Coastal Plain. | | | Rare; spike slightly flattened, solitary or in small clumps. | | | | | |
| <i>Xyris platyplepis</i> | All of FL | 50-110cm | 20-40-50cm | <15mm | Jul-Oct pm | ellipsoid or cylindrical | 1.5-3cm | 0.5-0.6mm |
| Savannahs, swamps, and wet ditches. | | | Scape twisted, two-edged, bulbous leaf base. | | | | | |
| <i>Xyris scabrifolia</i> | NW FL | 30-60cm | 2-40-70cm | 5-10mm | Aug-Sept am | ovoid or ellipsoid | 1.0-2.0cm | 0.4-1mm |
| Sphagnum bogs/sandy seepage slope, wet prairie. | | | Leaves few, narrow and scabrous, bulbous base, twisted scape, rarest | | | | | |
| <i>Xyris serotina</i> | All of FL | 24-60cm | 7-20-50cm | 2.5-12mm | Jul-Oct am | ovoid/broadly ellipsoidal | 10-18mm | 0.6mm |
| Pine savannahs, cypress flatwoods, and ditches. | | | Similar to <i>X. difformis</i> ; scape four ridges. | | | | | |
| <i>Xyris smalliana</i> | All of FL | 50-150cmd | 30-50-60cm | 0.5-1.5mm | Jul-Aug pm | ellipsoid to ovoid | 1.2-5cm | >0.6mm |
| Coastal, freshwater marshes, and roadside ditches. | | | Solitary or in tufts, scape one-two ridged and smooth. | | | | | |
| <i>Xyris stricta</i> | NW FL | 40-45-85cm | 15-20-50cm | 2-5mm | July mid-day | ellipsoid or cylindrical | 2-3.5cm | 0.8mm |
| Acid swamps, pineland ponds, and roadside ditches. | | | Leaves linear, scape two-edged with rough margins. | | | | | |