

Cryptocoryne beckettii

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Identifiers

Latin Names: *Cryptocoryne beckettii* Thwaites ex Trimen

Common Names: watertrumpet

The genus name *Cryptocoryne* is derived from the Latin *crypto*, meaning hidden, and the Greek *koryne*, meaning club. The common name (watertrumpet) refers to the shape of its inflorescence, which is typical of the arum family. There are currently no accepted synonyms for *C. beckettii*.

Stewardship summary

Cryptocoryne beckettii has been recently observed invading the San Marcos River in Texas, and there are (unconfirmed) reports of it in Florida. (*Cryptocoryne wendtii* is established in the wild in Florida, where it is not native (Atlas of Florida vascular plants, 2000).) *Cryptocoryne beckettii* is thought to have escaped from cultivation via the dumping of aquariums. Its potential range as an invader in North America is uncertain, but it may easily expand throughout the Gulf coastal plain, Florida, and the southern Atlantic coastal plain.

Native to southeastern Asia, *C. beckettii* is an attractive herb in the arum family (Araceae), and which has been one of the most popular aquarium plants for more than 60 years (Bastmeijer,

2001; Tropica Aquarium Plants, 2001). Since the confident identification of members in this rely on floral characters, the plants in Texas (which were not flowering) should not be considered absolutely certain (Bastmeijer, 2001). *Cryptocoryne beckettii* reproduces both vegetatively (by stolons) and by seeds.

Impacts

The overall impacts of this new invader are unknown. In the San Marcos River in Texas, *C. beckettii* has been reported as forming colonies that extend from bank to bank and exclude native plants and animals. This is of special concern because the San Marcos River is home to several federally and state listed species, including Texas wild-rice and the fountain darter (a native fish). These species seem to be sensitive to either direct competition for resources, or by the displacement of their native habitat(s).

According to Bob Howells (Texas Parks & Wildlife), *C. beckettii* is not likely to be as major an environmental threat as hydrilla (*Hydrilla verticillata*) or water hyacinth (*Eichhornia crassipes*), because of its relatively small size. *Cryptocoryne beckettii* is also rather selective in its water chemistry and type preferences.

Natural history

Description

Cryptocoryne beckettii is a perennial, rhizomatous, herb that can grow as an emergent or as a submerged aquatic. It has basal leaves with elongate, sheathing petioles up to 15 cm (approximately 6 inches) long. The blades are glabrous, ovate to narrowly ovate, 3 to 9 cm (1.2-3.5 in) long and 1 to 3.5 cm (0.4-1.4 in) wide. The blade's upper surface is green to dark green or brown and marbled to red-brown, and the lower surface is generally red-tinged, to more or less brownish or green. The leaves have an acute to acuminate apex, entire or sometimes undulate leaf margins, and conspicuously red veins. Submerged plants usually have larger, thinner leaves. The rarely-seen inflorescences are short-peduncled with a 4 to 12 cm (1.6-4.7 in) long spathe. The greenish-brown limb is twisted, upright to somewhat recurved, and narrowly ovate in shape, generally 0.5 to 1.2 cm (0.2-0.5 in) wide and 1.5-3 cm (0.6-1.2 in) long. The spadix is typically 1.0 cm (0.4 in) long (Rosen, 2000).

Reproduction

Cryptocoryne beckettii reproduces rapidly in the wild, spreading and multiplying by vegetative (stolon/rhizome) growth (Windelov, 1987), but sexual reproduction in North America is not common (Rosen, 2000). *Cryptocoryne beckettii* can easily be reproduced by micropropagation (tissue culture) techniques (Kane et al., 1990), and broken stem portions may produce new ramets.

Range

Cryptocoryne beckettii is native to Sri Lanka, where it is found in freshwater springs and rivers (de Graaf & Arends 1986). While it can easily adapt to a wide range of water conditions, *C. beckettii* prefers a stable environment with small temporal variations in water chemistry.

As an invader in North America, *C. beckettii* has been reported from the San Marcos River in the city of San Marcos, Texas (Rosen, 2000). It appears to prefer open shallow riffles and shaded deep pools. It could potentially spread widely throughout the US Gulf coastal plain, Florida, and the southern Atlantic coastal plain. Plants in this genus are typically demanding in cultivation, so *C. beckettii* may also be selective in its wildland habitats.

Management/Monitoring

There are currently no reported control methods for *C. beckettii*. It does not reproduce readily by fragmentation (like hydrilla), but mechanical approaches may not be successful unless the entire tuberous root-stock and underground stem portions are physically removed (Howells, 2001). If only the leaves and stems are removed, regrowth often occurs. Herbicides may work to kill this species, but harm to native species may result if this is not done carefully.

Information sources

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