

Ho! Ho! Ho! Merry Christmas Senna¹

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Introduction

Christmas must be just around the corner because home landscapes are colored with the bright yellow flowers of Christmas senna (*Senna pendula* var. *glabrata*). Christmas senna is a long time favorite landscape plant, commonly cultivated as an ornamental in Florida at least since the 1940s (Bailey and Bailey 1947). Christmas senna is so named because it blooms during the Christmas season (Fall-Winter). It is popular, in part, because of its showy yellow flowers (Fig. 1). This is especially true in the northern part of the state, where it is one of the few landscape plants that bloom in late fall and early winter. It also is popular for butterfly gardens (Fig. 2). Christmas senna also is known as Christmas cassia, winter cassia, climbing cassia, cassia shrub, butterfly cassia, butterfly bush, or just plain cassia. The common name “cassia” is derived from the genus *Cassia*, to which the species historically belonged. “Climbing” describes the plant’s clambering growth habit when support is available, while “shrub” refers to its growth habit in open ground. In the nursery trade it is known by the botanical name of *Cassia bicapsularis*.

Christmas senna can be seen blooming not only in landscapes, but also along roadsides, canal banks, hammocks, marshes, and even mangrove communities. It escaped from cultivation and has become a weed in natural areas and other sites in central and southern Florida (Fig. 3). Those traveling the state by car will especially notice the brilliant yellow flowers along commonly traveled roads such as Florida’s turnpike south of Orlando, I-75 south of Sarasota, and SR 60 between Yeehaw Junction and Vero Beach.

The virtues of Christmas senna as an ornamental landscape plant have been well described (e.g. Dirr 2002; Gilman and Black 1999; Bender and Felder 1993). Little, however, has been published concerning the escape of this plant

into the wild. Because of the confusion in taxonomy, everyone may not realize that the plants for sale in the nursery trade are the same species as those escaped and growing in the wild. This article will provide information on the biology of Christmas senna outside of cultivation and clarify the taxonomy.

Distribution

Christmas senna is native to Brazil, Peru, Bolivia and south to Paraguay and Argentina. It is cultivated in warm regions of both hemispheres. In the US it occurs in Florida, Texas (common in southern Texas), California, Arizona, and probably in other Sunbelt states (Isely 1998). It is cultivated in all regions of Florida (Hunt 1977, Nelson 1996). Herbarium records document it as outside of cultivation from Hillsborough and Brevard Counties south to Dade and Collier Counties (Wunderlin et al. 2003). It is reported from scrub and forest natural areas in Palm Beach County and from the edge of Lake Okeechobee in Hendry County (EPPC 1996). In Collier County, it invades mangrove communities at the headwaters of the Baron River (personal observation by the author). It was reported as a weed of canal banks, roadsides, and fencerows in 1977 (Orsenigo 1977). It has been observed in the wild in south Florida since the early 1970s (D. F. Austin, Florida Atlantic University, 1995 personal communication). It is noted as naturalized in south Florida and becoming weedy in the Bahamas and disturbed areas in South America (Irwin and Barneby 1982). Isely (1990) described it as moderately established outside of cultivation in Florida.

Natural History

Christmas senna produces flowers from October through January. Large numbers of seeds are produced, which mature through the spring and summer. Seeds may be dispersed by *continued on page 12*



Fig. 1



Fig. 2



Fig. 3



Fig. 4

1. The invasive characteristics of this plant have not been assessed using the IFAS Assessment of Non-Native Plants in Florida’s Natural Areas.

Merry Christmas Senna *continued*

birds, mammals, and/or human conveyance but specific dispersal agents have not been identified. Plants are hardy north of the frost line as they will regrow after tops are killed by freezing (Maxwell and Maxwell 1961). Specimens (reported as *C. bicapsularis*) over 3 m (10 ft) are common as far north as Charleston, South Carolina (Dirr 2002). The lack of herbarium records north of Hillsborough and Brevard Counties suggests that the plant has not escaped or effectively reproduced out of cultivation in colder climates of the state. Plants may not produce viable seed when they are frozen back in winter, which is a possible explanation. However, sexual reproduction has been observed as far north as Gainesville (David Hall, 2003 personal communication). Whether the species can become as abundant in the northern part of Florida remains for future determination.

Christmas senna often becomes established in sunny openings and then clambers over adjacent vegetation (Austin 1998). It displaces native plants in both disturbed and

undisturbed areas of Florida's tropical hammocks, coastal strands, and canal banks (M. Renda, The Nature Conservancy, 1996 personal communication).

Taxonomy

The genus *Senna* (Family Fabaceae) is represented by ten species in Florida, four native and six introduced (Wunderlin 1998). The correct nomenclature for the Florida plants called by the common name Christmas senna is *Senna pendula* (Willd.) Irwin & Barn. var. *glabrata* (Vogel) Irwin & Barn. (synonym *Cassia colutooides*). This revised nomenclature is based on the separation by Irwin and Barnaby (1982) of the large genus *Cassia* into *Cassia*, *Senna*, and *Chamaecrista* based on male floral characteristics.

Christmas senna plants found in cultivation or established in Florida usually have been identified as *Cassia bicapsularis*, which they are not (Isely 1998). The species *Cassia bicapsularis*, now properly called *Senna bicapsularis* (L.) Roxburgh, has been only slightly introduced into the United States and is not known to have escaped in Florida (Isely 1990). *Senna bicapsularis* has leaflets in 3 pairs and flower stalks (pedicels) 3-5 mm (0.12-0.2 in) long, while the commonly escaped *Senna pendula* has leaflets in 4-7 pairs and flower stalks (pedicels) 2 cm (0.08 in) or more long (Isely 1998). The species name *pendula* describes the growth habit of the branches, which arch downward.

Botanical Description

Christmas senna is a sprawling evergreen shrub to 4 m (13 ft) tall (or wide), with somewhat zigzag, sparsely hairy stems. Leaves are alternate, stalked, even-pinnately compound, with 4 to 7 pairs of leaflets, the larger ones occurring at the leaf tip. The leaflets are up to 4 cm (1.6 in) long, oblong with rounded tips; leaf stalks (petioles) have a gland on the upper surface, between lowermost leaflets (and occasionally between others). The flowers are yellow or yellow-green, 3 to 4 cm (1.2 to 1.6 in) across, in 3- to 12-flowered racemes near the stem tips. Stamens in the flowers have prominent, curved filaments (Fig. 4). The fruit is a brown slender pod, cylindrical, glabrous, 7 to 12 cm (3 to 5 in) long.

Control

Christmas senna can be controlled by foliar or basal bark herbicide application. The following foliar applications on a spray-to-wet basis have been found effective: 1.0% Roundup Pro, 0.5% Garlon 3A + 0.375% Induce, 0.50 oz/gal Escort + 0.375% Induce, 3.13% Brush-B-Gon. Basal bark application of 10% Garlon 4 in oil is used by the Southwest Florida Water Management District (Mack Sweat, 2003 personal communication).

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