

editor's note

Everglades champion Marjory Stoneman Douglas was born in 1890. She died this year at the age of 108. Over the span of one lifetime, Florida changed dramatically. Plant enthusiasts - think about this: The year Marjory was born, only a handful of Florida's most invasive plants had been brought into the United States - and none were misbehaving.

Within a century - a blink in geologic time - much of Florida's flora has been replaced with weeds from other continents. Although plant migration is a natural part of evolution - plant ranges do expand and contract - the deluge of plants brought into Florida over the past hundred years is clearly *unnatural*. Natural plant migration takes thousands of years. Unnatural migration can take *hours*. (How long could it take to fly a pocket-full of carrotwood seed from Queensland to Miami?) We actually welcome new

plants to invade our shores. There are no front-end screening protocols for pest plants, just plant pests. (Maybe the inscription on the Statue of Liberty ought to read: "Give me your fast growers, your poor soil-lovers, your impenetrable thickets yearning to spread freely...!") We are, undoubtedly, still introducing and promoting new melaleucas and Brazilian peppers. The names are different, but the results will be the same.

Will any of us live past the 100-year mark? Who knows...some of us might. If we do, will we think back on these as the "good old days," when there were still some natural areas to enjoy native plants? Maybe we will, but hopefully we've learned from our mistakes. The plants keep coming in, but biologists and land managers are getting better at spotting trouble. Melaleuca was allowed to flourish in South Florida for 70 years before anyone noticed (or cared). That's changed. Today we're lucky to have groups like EPPC and the Florida Native Plant Society that strive to keep Florida *Florida*. - Amy Ferriter

Fountaingrass - A Dry Region Threat

By Keith Bradley

Fountaingrass (*Pennisetum setaceum*) is a commonly used ornamental grass in warm regions throughout the United States. Its large showy plumes are attractive, and it needs little water, making it popular in xeriscaping. It is native to tropical Africa, southwestern Asia, and Arabia where it grows on cliffs and ledges, dry river banks and river beds, and rocky gorges from the coast to an elevation of over 7200 feet (Prain, 1934). It has escaped from cultivation and has become an aggressive weed in several parts of the world.

Unfortunately, while fountaingrass makes an attractive landscape plant, it does escape cultivation, and has become a serious pest in some regions. It is causing the greatest problems in Hawaii, primarily on the island of Hawaii, but it also occurs on Kauai, Oahu, and Lanai. It was introduced to Hawaii at the beginning of the 20th century and has since become one of Hawaii's most troublesome and aggressive weeds (Tunison, 1992). Fountaingrass colonizes nearly every open, dry to mesic



Fountaingrass (*Pennisetum setaceum*) is a medium sized clump-forming perennial foxtail grass. The culms are 1/2 - 4 feet tall. The blades are somewhat stiff, 1.5 - 2 feet long, convolute (the edges rolled upwards and in), and have a thickened midrib. The panicle is pink to purple, cylindrical, and 1/4 to 1 foot long, forming very attractive plumes. Cultivars are available under the names "Rubrum" with rose colored foliage, "Cupreum" with reddish foliage, and "Atrosanguineum" with purple foliage. Photo by Keith Bradley.

habitat type, even barren lava flows and cinder fields from sea level to above 8800 feet. It has the greatest altitudinal distribution of any grass in Hawaii.

In southern and central California, it is frequent on roadsides and sparingly escapes into desert and steppe regions. In Arizona, it has been recorded escaping to roadsides in the Santa Catalina Mountains. It has also escaped to roadsides in Fiji and the Cape Peninsula of South Africa. In Florida, it is colonizing roadsides and the edges of pine rockland fragments from Miami to Key Largo in the upper Florida Keys, scrub margins in Palm Beach County, and at Disney World, outside of Orlando. To date, it has not been observed invading a natural area in Florida.

Fountaingrass has a suite of characteristics that make it an excellent invader. Seeds are dispersed by wind, water, humans (on vehicles), and possibly by birds (Tunison, 1992), and it can re-establish quickly after fire (Wagner, et. al. 1990). Fountaingrass seeds may also remain viable in a seed bank for at least 6 years (Tunison, 1992). Physiological studies show that fountaingrass has a high degree of



Fountaingrass has been seen colonizing the margins of natural areas such as the Palm Beach County-owned Yamato Scrub in Boca Raton, FL. Photo by Steve Woodmansee.

phenotypic plasticity (Williams et. al., 1995). This allows it to have an extremely broad ecological amplitude, giving it the ability to invade a large number of different community types in Hawaii. The good news is that it is believed to have relatively little cold tolerance (Simpson & Bashaw, 1969).

Management of fountaingrass in Hawaii has consisted of hand pulling plants and removing inflorescences from the site. Follow-up treatments are required because of the persistent seed bank (Tunison, 1992). Biological control was considered unfeasible by Tunison (1992). Even if control agents

could be found, they could very likely be harmful to a valuable forage grass (*Pennisetum clandestinum*). In order to prevent the spread of fountaingrass in Florida, it is necessary to eradicate existing small populations and eliminate the use of fertile selections in the landscape trade. The "Rubrum," "Cupreum," and "Atrosanguineum" cultivars are essentially sterile (Simpson & Bashaw, 1969) and seem to present no threat to natural areas at this date. *Keith Bradley is a Researcher with the Institute for Regional Conservation in Miami, FL.*

References

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opinion



Clyde Butcher:

KNEE-DEEP IN THE BIG PICTURE

By Tom Fuicigna

"I make my photos big, so that you can't see them..." A strange quote perhaps from a man who has made his mark in the visual media. But, of course, there's more to the quote "...you have to experience them." Butcher reminds us that we don't really see in an arc of 180 degrees. We only capture bits and pieces at a time, and then assemble a mental collage - the big picture.

Clyde Butcher was a keynote speaker at this year's EPPC/Florida Native Plant Society (FNPS) joint conference. He shared the story of his evolution into a premier naturescape photographer. Clyde's life has been a journey that has carried him from an education in structural architecture in the 1960s on the California coast, to his present home

"There is nothing worse than a sharp image of a fuzzy concept."

-Ansel Adams

and photo gallery in the heart of South Florida's Big Cypress National Preserve.

Clyde and his photographer wife, Niki were first drawn to Florida as boaters seeking tropical shores and easy access to the Caribbean. "I thought Florida was all beaches and Disney World." He did not find the state particularly photogenic. "When I first came to Florida, I didn't see anything to photograph." Little did he know he would spend a significant portion of his life standing knee-deep in muck, waiting for the perfect light over a sawgrass marsh. As Clyde discovered during his early forays, there is a lot more to Florida than meets the tourist brochures.

Ansel Adams was one of Clyde's early influ-