

The Quarterly Journal of the Florida Native Plant Society

Palmetto



The Cardinal Mallow

Mystery of the Red Hibiscus



by Robert W. Read, Ph. D.

In April of 1774, while Florida was still a British possession, William Bartram traveled the Rio San Juan south from its mouth, near what is now Jacksonville. This botanist/horticulturist with a poetic bent wrote extensively of the sights, sounds, wildlife and plants he saw along the way. He seemed particularly enamored with the brilliant cardinal mallow. "Lake George" Bartram wrote: "is beautified with two or three fertile islands," with "...many curious shrubs. The islands have...rich swamps on the shores..., and are...verged on the outside with large marshes, covered entirely with tall grass, rushes, and herbaceous plants; amongst these are several species of *Hibiscus*, particularly the *Hibiscus coccineus*. This most stately of all herbaceous plants grows ten or twelve feet high, branching regularly, so as to form a sharp cone. These branches also divide again, and are embellished with large expanded crimson flowers. I have seen this plant of the size and figure of a beautiful little tree, having at once several hundred of these splendid flowers, which may be then seen at a great distance. They continue to flower in succession all summer and autumn, when the stems wither and decay; but the perennial root sends forth new stems



the next spring, and so on for many years. Its leaves are large, deeply and elegantly sinuated, having six or seven very narrow dentated segments; the surface of the leaves and of the whole plant, is smooth and polished."

According to Mary Francis Baker (1938); a botanist of the past century described *Hibiscus coccineus* as "probably the most gorgeous of all the plants indigenous to the United States." Baker herself said that this crimson *Hibiscus* is "One of the most striking of our wild mallows." In Bailey's *Cyclopedia of Horticulture* (1950) *H. coccineus* was said to be indigenous from "Georgia south in swamps." Of its horticultural value Bailey wrote "apparently not hardy in the northern states: but, that "plants have lived in the open... in the neighborhood of Philadelphia."

While this species has been known since Bartram's time and was cultivated as far north as Philadelphia it is surprising that such a desirable plant should have been so neglected by authors of books on Florida wildflowers, landscaping and horticulture.

Although the cardinal mallow is a swamp dweller by nature, it is not restricted to that environment. About 15 years ago the author saw a plant of this species

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growing in a friend's yard in suburban Washington D.C. The brilliant red flowers and leaves resembling those of marijuana begged a request for a propagation. Not only did the small divided plant survive, it thrived, producing ten foot branching stems laden with bloom and setting numerous seed pods. The seed germinated in the spring with young plants of *Hibiscus coccineus* becoming established throughout the garden. Interest in the plants grew and many of the young plants were distributed among the author's friends. There can be no doubt about the hardiness of the species. The cardinal mallow thrives on heavy clay, sandy, humusy, wet or dry soils in the northeast. It therefore seemed to be the perfect landscape plant for native or cultivated gardens in south Florida. A characteristic of the species, like the other mallows, is that after a summer of bloom and seed set, the stems die down to the ground and remain dormant until early spring.

Along with the mystery of why the cardinal mallow is so poorly treated in the wildflower books, is the question, why isn't it commonly grown in south Florida? After several attempts to grow the cardinal mallow under normal garden conditions at the author's home near Naples, Florida, it was found that the only plants to survive were planted in soil that was saturated and/or flooded during the growing season. It was noted also that the seedlings developed root-knot nematode very quickly and became stunted. Under normal horticultural conditions nematodes took over and the plants died. When grown in the north where

the soil freezes, nematodes are apparently less of a problem and the plants thrive. It appears then that when the cardinal mallow grows in the deep peat and perennially flooded marshes of Corkscrew Swamp the nematodes are discouraged and the plants thrive.

The profusion of cardinal mallow at the Corkscrew Swamp Sanctuary can perhaps be partly explained by the particularly severe drought of the 1980's. The seedlings benefited by the shallow water during their growing season and mature plants are now thriving under the greater abundance of water. Distribution outside the Sanctuary in south Florida is perhaps restricted by the nematode problem and lack of conditions necessary for the germination and establishment of the seedlings. Once established, the vigorous perennial root system permits the plants to persist for many years, flowering and fruiting in abundance.

Two color forms exist for *Hibiscus coccineus*, the red or crimson as indicated by the specific epithet "*coccineus*", and a pure white form occurring spontaneously throughout the population at the National Audubon Society Corkscrew Swamp Sanctuary. The best time for blooming in south Florida is mid-summer.

Observations on the alba form of *Hibiscus coccineus*

Many species of plants produce pure white flowered forms when the usual and described flower color is otherwise.

*In the case of *Hibiscus coccineus*, not only are the petals white, plants that will produce white petaled flowers can be recognized even in the fruiting and seedling stages by the absence of red or purplish tints to the stems and leaves. The stems are pale green to almost chartreuse and the leaves remain perfectly green.*

A small percentage of seedlings grown from each batch of seed collected from red-flowered plants (ca. 7%) result in the alba-form. Likewise, about 22% of the seedlings grown from each batch of seed collected from the white-flowered plants results in the typical red form. Intermediate or pink -flowered forms are unknown.

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About The Author

Robert W. Read, Ph.D. first became interested in botany while serving as a volunteer at The Fairchild Tropical Botanic Garden in Miami, Florida.

He received his M.S. degree in botanical systematics and horticulture at Cornell University, and his Ph.D. from the University of the West Indies, Jamaica, West Indies.

Dr. Read was Botanist Emeritus at the Smithsonian Institution; served as Research Collaborator at The Fairchild Tropical Botanic Garden; and was a volunteer at the National Audubon Society Corkscrew Swamp Sanctuary near Naples, Florida.

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The purpose of the Florida Native Plant Society

is to conserve, preserve, and restore the native plants and native plant communities of Florida.

Official definition of native plant:

For most purposes, the phrase Florida native plant refers to those species occurring within the state boundaries prior to European contact, according to the best available scientific and historical documentation. More specifically, it includes those species understood as indigenous, occurring in natural associations in habitats that existed prior to significant human impacts and alterations of the landscape.

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Editorial Content

We welcome articles on native plant species and related conservation topics, as well as high-quality botanical illustrations and photographs. Contact the editor for guidelines, deadlines and other information.

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