

Florida for seventeen years in the sixteenth century, that the Florida aborigines—an isolated group of the American Indian, now extinct—"made bread of roots [*Zamia*], which is their common food the greater part of the year." Commenting on this statement it has been recorded that "The flour, prepared from the root, is called by the Spaniards Kun-ti hat-ki, 'white bread,' to distinguish it from the red bread, from the China briar-root, which they call Kun-ti tscha-ti." Referring to the use of this cycad by the Seminole Indians, Dr. William Baldwin recorded that "I had the gratification to find the 'Wild Sago,'" or Coontia,<sup>2</sup> of the Seminoles. . . . At supper, I had the pleasure to eat the bread prepared from the large tuberous root [stem] of this plant. In the late time of difficulty many negroes, and others, were prevented from perishing from hunger by having recourse to it; . . .<sup>3</sup>

Although the odds are evidently against the cycad and it is without doubt a vanishing type of plant, the natural growth in Florida, which furnished flour to the aborigines and to the Seminoles, and in a transition period—the seventies of the last century—to the Cubans for starching their linen,<sup>4</sup> now furnishes the white man with "Arrowroot crackers," for many of our arrowroot crackers are made, at least in part, from "Florida arrowroot," which is one of the names for the flour made from the native cycads of Florida.<sup>5</sup> Cycads play a large part in horticulture.

<sup>2</sup> Bow-legs, the grandson of Bartram's "Long Warrior," says, that "Coontia" signifies Bread Plant.

<sup>3</sup> For a history of *Zamia* in Florida see, "Seminole Bread—The Conti."—Journal of The New York Botanical Garden 22: 121-137. 1921.

<sup>4</sup> The manufacture, and export, of Coontie-starch was the main occupation and source of revenue of the pioneers of southern peninsular Florida.

<sup>5</sup> There are four species of *Zamia* in Florida: one of them is also native in Cuba; the other three are, apparently, endemic in Florida. The following is described here for the first time.

***Zamia silvicola*** Small, sp. nov. Leaves 1 m. long or less; leaflets 12-17 cm. long; the blades linear, often broadly so, 1-1.5 cm. wide, 14-20-veined, flat, obscurely toothed at the apex: staminate cone cylindrical or slightly tapering upward, 8-16 cm. long: mature ovulate cone ellipsoid-cylindric, mostly 9-14 cm. long: nut-like part of seed broadly obovoid, 18-20 mm. long, decidedly flattened, minutely pointed at both ends.—Humus, rich sandy soil, aboriginal village sites, and shell mounds, peninsular Florida.—The most robust *Zamia* in Florida, often abundant on the upper west-

They are easily grown and are very decorative objects. In warm regions species of *Cycas* and *Zamia* are used in out-of-door plantings. In conservatories in the cooler latitudes all the genera may often be found in a thriving condition and perfectly adapted, apparently, to their artificial habitats. In this way, again the cycads parallel the palms; and likewise, both primitive people and some of our contemporaries in their spiritual cravings consider the cycad a symbol, both of Life and of Death.

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#### FURTHER NOTES ON THE FLOWERS AND SEEDS OF SWEET POTATOES

As ordinarily grown, sweet potatoes are most decidedly sterile in respect to the production of capsules and seeds. The two main conditions responsible for this unfruitfulness are (1) the habit of non-blooming, especially throughout the more northern areas of their culture, and (2) the failure, even when blooming profusely, to set seed either to self-pollination or to pollination between plants of the same clonal variety. It should be noted that the various plants of the variety are all propagated from branches of one original seedling and that hence pollination between plants of the variety is the same as pollination between flowers on a single plant.

In a number of instances, however, seeds of sweet potatoes have been obtained and the breeding for new varieties from seed has been possible. The summary of these cases and the data bearing on the blooming and seeding habits of sweet potatoes were assembled from published records and from a rather extensive correspondence and published in considerable detail.<sup>1</sup> Since this report appeared further data have come to hand and also fruit and seeds have been obtained in controlled pollinations

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ern coast, and locally in hammocks southward in the peninsula. Plants on the shell mounds often have branching stems. This hammock inhabitant differs from the pineland-inhabiting species—*Zamia integrifolia*—in the more numerously veined, wider, and more remote leaflets, and the flattened nut-like part of the seed.

<sup>1</sup> The Flowers and Seed of Sweet Potatoes. Journal of The New York Botanical Garden 25: 153-168. June, 1924.