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Palmetto



A New Orchid Species From Central Florida • The Wildflower Garden – Piriqueta • Gardening For The Birds

The Wildflower Garden

Number 5 in the Series — by Rufino Osorio



Piriqueta cistoides subsp. *caroliniana*

Piriqueta cistoides subsp. *caroliniana* is a frequently encountered, perennial wildflower that grows in sunny situations in flatwoods, rocky pinelands, sandhills, and scrub. It probably occurs in every county in Florida but so far it has not been recorded, in the form of a vouchered herbarium specimen, from ten counties (Wunderlin & Hansen 2004). Different populations are exceedingly variable and differ with respect to growth habit (prostrate to erect); height (from a few inches to about two feet); vestiture (densely hairy with stellate or simple hairs to completely hairless); leaf shape (long and narrowly linear to short and elliptic-ovate); leaf margin (essentially entire to manifestly toothed); and flower color (pale to deep golden yellow). However, all forms are easily recognized by the following combination of traits: simple, alternate leaves; conspicuous and showy bright yellow flowers with five petals, five stamens, and three stigmas, each of which has a much divided, bushy tip; and seeds borne in capsules that split along three lines, that is, the capsules are three-valved. When first encountered, some forms of this plant might be mistaken for a large-flowered, yellow flax in the genus *Linum*; however, flax flowers have stigmas that lack bushy tips and the capsules split along more than three lines.

Botanically, the plant was long known as *Piriqueta caroliniana* (Walter) Urban; however, Arbo (1990; 1995) treated it as a subspecies of *P. cistoides* (Linnaeus) Grisebach. Arbo's treatment, while accepted by many botanists, is rejected by others. For example, Weakley (2007:669) maintains *P. caroliniana* separate from *P. cistoides* because the two remain morphologically distinct over a wide, overlapping range in the Neotropics. The situation regarding common names is equally unsettled with some favoring "pitted stripeseed," a recently concocted name, and others preferring to use the genus name as a common name. I favor the latter since "piriqueta" (pronounced PI-RI-KET-A) is more mellifluous than "pitted stripeseed" and there are historical precedents going as far back as the 1930s for using "piriqueta" as a common name (Baker 1938:143).

Questions as to its scientific or common name aside, it is extremely easy to grow in almost any garden situation, in both moist to dry soils, so long as it is provided with plenty of sunshine and kept free from the competition of larger, taller plants whose shade will greatly weaken or even kill it. Although plants will flower throughout an extremely long period from late winter to late autumn, they are never in continuous flower. Rather, the flowers are produced in

Left and below, *Piriqueta cistoides* subsp. *caroliniana*.
Right, caterpillar of the Gulf fritillary butterfly.
Photos by Rufino Osorio.



flushes lasting about two or three days with a variable, intervening period during which only a few flowers are produced. All plants in a given site will synchronize their flowering cycle so that they produce a flush of flowers simultaneously. When many plants are growing together and there is ample summer rain, there can be numerous cycles of simultaneous flushes of flowers resulting in a dazzling spectacle.

Individual, solitary plants usually fail to produce seeds, indicating that the plants are self-sterile. Therefore, I like to plant them in groups of a minimum of three genetically distinct plants so that seeds will form and the plants can self-sow and multiply – this is definitely a plant that the gardener wants more of! Seeds germinate freely but they are usually extremely difficult to gather since the walls of the ripe capsules fold back with a great and sudden force, ballistically hurling the seeds considerable distances and giving the gardener very little opportunity to harvest the seeds. Luckily, this is among the easiest of plants to grow from cuttings and I have never had a single

cutting fail to root within 10 to 14 days or so.

Regarding wildlife value, at least three different groups of insects use various parts of the plant as food. The seeds are provided with a tiny, nutritive appendage that is known as an “elaiosome” and its presence is an indication that ants, which are attracted to the elaiosome as a food source, may help to further disperse the seeds after they have been ballistically hurled from the capsules. The flowers also provide food to small and mid-sized native bees, which frequently visit the flowers and

serve as the principal pollinating agents. Lastly, it is a favored larval food plant for the Gulf fritillary, *Agraulis vanillae* Linnaeus. Many butterfly gardeners, who are familiar with the use of passion vines (*Passiflora* species) as caterpillar host plants by Gulf fritillaries, may be surprised to learn that they will readily use this plant as a caterpillar host plant, especially since the two genera seem to be so dissimilar. Appearances, however, are misleading and the two families to which *Passiflora* and *Piriqueta* belong, the Passifloraceae and Turneraceae, share many morphological, biochemical, and genetic similarities. Indeed, they are so closely related that the Angiosperm Phylogeny Group regards the merging of the two families as appropriate (2003:407).

Readers may well wonder how Gulf fritillaries can tell that the genera *Passiflora* and *Piriqueta* are related and that both are suitable host plants on which to lay eggs. After all, these two genera look completely different to human eyes and it is only by a very careful examination of floral details, fruit morphology, and genetic and



chemical analyses that we can tell that they are allied. The answer to this puzzle is that female Gulf fritillaries do not use their eyes to identify suitable host plants, but use chemical cues, and both genera produce cyclopentenoid cyanogenic glycosides that identify them as suitable caterpillar host plants to female Gulf fritillaries. 🌿

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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.



The Palmetto

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