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Fact box

Species: *Baltimora recta*

Family: Asteraceae

Common names: florecilla (Costa Rica), mirasol (Guatemala), flor amarilla (Nicaragua, Honduras, El Salvador)

Distribution: it is found from Mexico to Panama and is a common weed in many parts of Central America. In Costa Rica it is widely distributed in the western part of the country (provinces of Guanacaste and Puntarenas)

Flowering period: the main flowering season occurs at the beginning of July, in synchronization with a short dry period, locally called *veranillo*, which divides the rainy season

Pollen: pollen loads are orange, individual grains are spheroidal, tricolporate, about

30–40 μm in diameter. Exine echinate, echini $\pm 4 \mu\text{m}$. (fig. 1).

Value to bees: known as an important food resource for colonies of social bees in Central America. Africanized honey bees frequently visit flowers to collect large amounts of pollen and nectar. Some species of stingless bees (*Melipona* and *Trigona*), Anthophorids, Megachilids and Halictids were observed visiting the flowers. Butterflies, wasps, moths, flies, bugs and beetles are also reported

Honey: light yellow in colour, with a pleasant flavour and good aroma. Beekeepers can usually obtain significant yields of honey from areas in which *B. recta* grows

Other uses: this weed is very invasive in pastures and often is under intensive control from stock farmers who use these open areas for cattle breeding

Description

Baltimora recta is a polygamous herb, straight and branched, sometimes reaching up to 2.5 m in height, \pm strigose on all parts. Leaves opposite, petioles 8–70 mm long; blades \pm ovate, acuminate, truncate to abruptly attenuate at base, 2.5–15 cm long, 1.5–12 cm wide. Inflorescences have terminal racemes or more often large panicles;

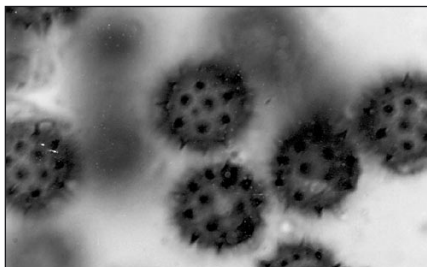


FIG. 1. *Baltimora recta* pollen grains.



FIG. 2. *Baltimorea recta* plants showing inflorescences.



FIG. 3. *Baltimorea recta* flower.



FIG. 4. *Baltimorea recta* growing in an open area.

peduncles are 8–33 mm long (fig 2); heads 7–22 mm long; ray flowers yellow, 3–8, pistillate, fertile, the ligule 4–6 mm long, the pappus a small crown; disk flowers 16 or more, bisexual, partly fertile, yellow, c. 2.5 mm long, the anthers with the appendage truncate (fig 3). Achenes 2.4–3.2 mm long, truncate and puberulent at the apex; pappus a crown-like cup.

Habitat

Baltimorea recta is a herbaceous and branched annual common weed. Generally it grows in open and waste areas, often in pastures or secondary growth lands and along the roadsides (fig 4). Its range is distributed from 100–2000 m above sea level. It is well adapted to a wide variety of soils. Its habitat is ecologically variable, found in tropical moist forest, premontane moist forest, premontane wet forest, tropical wet forest and is

especially abundant in the tropical dry forest.

Cultural notes

Seeds that have been dormant for several months are stimulated to germinate by the first rains in April or May; later many seedlings will be seen growing in open areas. The stock farmers do not like this weed, and they usually control it.

Association with bees

In the rainy season, during the short dry period that divides it, an extensive and dominant bloom of this herb is found on the pacific slope of Costa Rica, and it is an important food resource for honey bees. Several Central Valley beekeepers move their colonies to Guanacaste and Puntarenas to obtain nectar and pollen from *B. recta*. Some beekeepers use these resources as a

stimulus to divide colonies, while others, to obtain an important honey harvest.

Workers from hives of Africanized honey bees (*Apis mellifera*) were observed visiting a big patch of *B. recta* flowers, collecting pollen and nectar. Foraging activity was highest early in the morning; 75% of the bees were collecting food from 06.00 h to 09.00 h. The orange-coloured pollen loads of *B. recta* were dominant at that time.

The average area of pollen stores in combs of both nucleus and full-size colonies tended to increase when the bees were foraging on *B. recta*, although this tendency was greater in colonies than in nucs. Honey stores in colonies also increased at that time. The microscopical analysis showed that 95% of the pollen grains from the colony were from *B. recta*.

Further reading

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