

Scientific note

Pupal chamber and first report of *Fulcidax bacca* (Kirby, 1818) on Rutaceae

(Coleoptera: Chrysomelidae: Cryptocephalinae)

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Fulcidacini (Chrysomelidae: Cryptocephalinae) are highly diverse in the Neotropics. Adults have tubercles on their dorsum, hence their name: “warty leaf beetles”. These are Camptosomata, characterised by the construction of faecal shelters.

No other Fulcidacini genus attracts as much attention as *Fulcidax* Voet, 1806, which comprises eight recognised species of large, iridescent adults. The only species found outside South America, in Mexico, is *Fulcidax bacca* (Kirby, 1818) (Monrós 1951).

Food plants of *Fulcidax* are known to belong to Fabaceae and Myrtaceae (*F. bacca*) (Monrós 1951); and Malpighiaceae (*F. cupreus* (Klug, 1824) and *F. monstrosus* (Lacordaire, 1848)) (Bokermann 1963, Flinte & Macêdo 2004). This work reports a new host for *F. bacca*, its pupal chamber and geographic distribution.

A *F. bacca* specimen and its faecal shelter were found in the Coleção Entomológica Padre Jesus Santiago Moure (DZUP), Curitiba, Brazil, with host plant information on labels. The material was photographed and labels transcribed. A distribution map of *F. bacca* was created based on given coordinates or points generated using Google Maps coordinates of the most precise locations on: (a) specimens’ labels (DZUP 325650–325652, 329893–329900); (b) material examined by Monrós (1951); and (c) *Fulcidax* records on iNaturalist (if identification could be made and up to the submission date of this work). All of the examined material was identified according to *F. bacca* descriptions.

The adult of *F. bacca* is a female (Fig. 1A) along with its pupal chamber (DZUP 325652) (Fig. 1B) and possesses the following label data: “8-43 \ P.Grossa \ Encontrado \ numa \ laranjei- \ ra, carreg. sua casa. [found on an orange tree, carrying its shelter] | 1591 | Fulcidax \ bacca \ (Kirby 1818) \ Bokermann det. 1961 | DZUP \ 325651”.

Fulcidax bacca can be distinguished from other species by the absence of elytral ridges and iridescence on the sterna. Unlike the instar IV faecal case (Bokermann 1963), its pupal chamber does not appear to have flaps; however, these may have broken during handling. The most striking difference is that the faecal case was built parallel to the longitudinal axis of the egg capsule, whereas the pupal chamber (Fig. 1B) is perpendicular to it.

Citrus sp. (Rutaceae) represents a new host plant family for Fulcidacini and the fourth food plant family for *Fulcidax*. While it is not surprising that *Fulcidax* is a polyphagous genus (Agrain et al. 2024), this discovery further solidifies this status. *Fulcidax bacca* is distributed throughout the Neotropics (Fig. 1C).

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Fig. 1. **A.** *Fulcidax bacca* (Kirby, 1818) (Coleoptera: Chrysomelidae: Cryptocephalinae), female; **B.** its pupal chamber, showing the positions of the maternal egg capsule (red circumference) and the larval definitive seal (blue circumference); and **C.** its distribution.