

**STUDY OF SOME ASPECTS OF THE BIOLOGY OF *CHRYSOMYA ALBICEPS*
WIEDEMANN, 1819 (DIPTERA: CALLIPHORIDAE), A NECROPHAGOUS INSECT
BREEDED ON PIG (*SUS SCROFA DOMESTICUS* L., 1758) LIVER, IN SUBEQUATORIAL
HOT AND HUMID, NATURAL ENVIRONMENT OF COTE D'IVOIRE**

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ABSTRACT

The use of necrophagous insects for forensic expertise, requires knowledge of their life cycle. In this perspective, some aspects of the biology of Chrysomya albiceps have been studied in the subequatorial natural environment of Côte d'Ivoire. It was essentially a question of determining the development cycle time of Chrysomya albiceps as a function of the quantity of the nourishing substrate of its larvae. The work took place on the site of the National Center of Floristics (Félix Houphouët-Boigny University, Abidjan-Côte d'Ivoire). During this study which took place from March 26 to June 29, 2017, the average ambient temperature was 28.24°C and the average relative humidity was 84.28%. Ten pairs of C. albiceps were deposited on a 250 g portion of pig liver (Sus scrofa domesticus L.). The first female clutches, the eggs were counted. For the determination periods of each development phase, 200 stage 1 larvae were deposited on 5 different portions of fresh pig liver (50, 100, 150, 200 and 250 g). Observations were made up to the pupal phase. Then the pupae were placed in emergence cages. Calculated parameters were: larval phase, prepupal, pupal duration, pupation rate, and total development time. The emergence rate and the sex ratio were determined afterwards. The development of C. albiceps larvae showed three larval stages and one pupal stage. When the larvae ran out of food, they developed intra-specific predation behavior. The high rate of nutrient substrate mass loss was in favor of the substrate with the highest larval density. The total development times were 9.30 ± 0.11 and 12.17 ± 0.14 days, respectively on the 50 g and 250 g substrates. Adult emergence rates were $28.43 \pm 0.82\%$ and $96.73 \pm 1.21\%$, respectively, on the 50g and 250g substrates. Adult lifetimes were 15.98 ± 0.30 and 24.05 ± 0.45 days, respectively for the 50 g and 250 g substrates. Large substrates favored good larval development and adult longevity of C. albiceps.

KEYWORDS: Calliphoridae, Chrysomya Albiceps, Developmental Biological Cycle, Forensic Entomology, Post Mortem Interval, Subequatorial Climate of Côte d'Ivoire

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