

Contribution of the screen traps for beetles' migration flow evaluation in rubber agrosystems in the south-eastern Côte d'Ivoire

DOUAN Bleu Gondo^{1*}, DANON Aubin Silvère Djiwha², BEUGRE N'djiha Isabelle³, GUINAGUI N'doua Bertrand⁴, KODJO Adaba Tano Thierry², KRA Kouadio Dagobert², KWADJO Koffi Eric², DOUMBIA Mamadou²

¹University Peleforo GON COULIBALY, Department of Animal Biology, BP 1328 Korogbo, Côte d'Ivoire.

²University Nangui Abrogoua, UFR-SN Department of Natural Sciences, 02 BP 801 Abidjan 02 Côte d'Ivoire.

³National Agronomic Research Center, Rice program, Man station, BP 440 Man, Côte d'Ivoire

⁴University Félix Houphouët-Boigny, Pedagogical and Research Unit: Plant Physiology and Pathology, Côte d'Ivoire

*Corresponding author: E-mail: bleudouan80@gmail.com / douanbleu@upgc.edu.ci, Tél: +225 0708323696

Keywords: migration flow, beetle, agrosystem, rubber cultivation, Côte d'Ivoire

Submission 05/10/2022, Publication date 31/01/2023, <http://m.elewa.org/Journals/about-japs>

1 ABSTRACT

This study focuses on the migration flow of beetles entering and leaving rubber plantations in the south-east of Côte d'Ivoire. To do this, the screen trap was used in different habitats including rubber plantations aged 1 to 5 years, aged 6 to 10 years, aged over 15 years and a forest taken as a control. The results showed that, in general, the beetles leave the plantations more than they enter them. The proportion of beetles leaving in all habitats is 69.54% against 30.46% for those entering. There is no difference between the numbers of beetles leaving and entering rubber plantations aged 1 to 5 years and 6 to 10 years. However, for plantations older than 15 years and the forest, the numbers of insects that leave are higher than those that enter these habitats. Of all the habitats, the average numbers of insects that leave are higher in the forest with 127.08 ± 22 individuals. Plantations aged 6 to 10 years recorded the greatest number of beetles entering the habitats with 33.25 ± 17.25 individuals on average. The family richness of beetles leaving habitats is higher in the forest with 11.35 ± 0.79 families on average and is lower in plantations aged 1 to 5 years with 7.16 ± 0.87 families. As for the incoming side of the habitats, plantations aged 1 to 5 years are richer in families with 7.33 ± 1.48 individuals and the forest is less so with 6.5 ± 0.73 families on average. Finally, the dynamics of beetles entering and leaving habitats throughout the year show that insects come out more during the rainy seasons with a peak in the number of insects leaving in April and November. However, during the dry seasons these, insects enter more habitats with a peak in numbers in February and March.