



Effect of a single *Xylocopa olivacea* Fabricius, 1778 (Hymenoptera: Apidae) flower visit on *Solanum lycopersicum* L., 1753 (Solanaceae) Rudina variety at Meskine (Maroua, Cameroon)

Mamoudou Jean¹, Fameni Topé Sidonie^{1*} and Tchuenguem Fohouo Fernand-Nestor²

¹ Department of Biological Sciences, Faculty of Science, University of Maroua, P. O. Box: 814 Maroua, Cameroon.

² Department of Biological Sciences, Faculty of Science, University of Ngaoundéré, P. O. Box: 454 Ngaoundéré, Cameroon.

*Corresponding author e-mail: sidofameni@gmail.com ; Tel.: (+237)697438668

ORCID iD: 0000-0002-4318-4060

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1 ABSTRACT

To evaluate the effect of *Xylocopa olivacea* on *Solanum lycopersicum* productions, foraging and pollinating activities of the individuals of this carpenter bee were examined at Meskine in Maroua (Far North, Cameroon) in January 2019 and February 2020. Every year, the trials were done on 540 flowers separated into four treatments: two treatments distinguished by the presence or absence of protection of flowers; the third with flowers preserved and revealed when they were bloomed, to permit a single *X. olivacea* visit; the fourth with flowers preserved then uncovered and reprotected without the visit of some life forms. Foraging activity and pollination effectiveness of *X. olivacea* on flowers were assessed. Outcomes demonstrate that 21 insect species recorded on tomato flowers, *X. olivacea* ranked second representing for 21.39 % of visits. This bee consistently and intensively gathered pollen, though nectar was marginally harvested. All through the pollination effectiveness of a single flower insect visit, *X. olivacea* expanded the fruiting rate, the mean number of seeds per fruit, and the percentage of typical seeds by 39.45 %, 35.19 % and 8.51 %, respectively. Thus, the installation of the nests of this carpenter bee near or within tomato fields is recommended to enhance fruit production as well as seed quality.