Comparison of carabid beetles community between two cereal fields (treated and untreated) in north east of Algeria

Yasmina Saouache‡, Saliha Boumalit§, Insaf Bouhdjar§

‡ Université Constantine, Laboratoire de biosystématique et écologie des arthropodes, Constantine, Algeria
§ University Constantine 1, Constantine, Algeria

Corresponding author: Yasmina Saouache (carabyes@yahoo.fr)

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Abstract

The average yield of cereal crops increased by more than 98% worldwide and part of this dramatic yield increase is due to the increasing use of pesticides. Unfortunately, the use of phytosanitary products to eliminate pests has not spared some natural enemies of these crops.

Carabids beetles are important biological control agents in agroecosystems and are one of the most sensitive invertebrate groups to environmental disturbances such as use of pesticides or type of plowing. However, in the context of beetle diversity conservation and encourage biological control, we have undertaken a bioecological study of the carabid fauna in two cereal fields (treated and untreated) situated in the north est of Algeria. The beetles were sampled from april to june 2018.

Species richness and abundance values revealed a great difference between the two sampled area. We recorded 38 species and 332 individuals in the untreated field versus 18 species and 89 individuals in the treated field. The data of the species traits as diet, dispersal ability and habitat affinity show that predators, macropterous and xerophilic species dominate in both crops.
Keywords

Carabidae, Wheat fields, Algeria

Presenting author

Yasmina Saouache

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Laboratoire de biosystématique et écologie des arthropodes. Université Constantine 1;3. Algérie