



# TEAM 2016



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ABSTRACTS

## POPULATION DYNAMICS AND NICHE PARTIONING BETWEEN INVASIVE TEPHRITIDS IN COMOROS

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Ten species of tephritids of economic importance occur in the Comoros Union, including *Bactrocera dorsalis* that was first recorded in 2005. Comoros Union is composed of three volcanic islands (Grande Comore, Moheli and Anjouan) each with different topography and strong differences in climatic factors within and between islands. Up to now, little was known about the influence of these factors on tephritid species distribution and interactions on the archipelago. The main objectives of this study were to characterize (i) population dynamics of fruit flies in relation to seasonality and host fruit availability and (ii) the geographic distribution of tephritids in relation to temperature and rainfall. The study was carried out on all three islands in 11 sites (altitudes from 55 m to 855 m) during two years. In each site, flies were collected in eight traps (four different lures, replicated twice) and fruit phenology was recorded weekly. The invasive species *B. dorsalis* was found as the most dominant species followed by *Ceratitis capitata*. The population density of the different species was higher during the hot and rainy season than during the cold and dry season. Higher densities of *B. dorsalis* were observed on Grande Comore than on Moheli or Anjouan where the invasion is probably more recent. High densities of *B. dorsalis* were significantly related to fruiting of guava and mango. *Bactrocera dorsalis* was found to prefer hot and humid areas, while *C. capitata* preferred dry areas of medium altitude, suggesting niche climatic partitioning between the two species.

*Keywords: Comoros, invasive tephritids, population dynamics, Bactrocera dorsalis*