ORAL. POPULATION DYNAMICS AND NICHE PARTIONNING BETWEEN INVASIVE TEPHRITIDS IN COMOROS

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Abstract:
Ten species of tephritids of economic importance occur in Comoros Union, including Bactrocera dorsalis that have been recorded since 2005. While different climates, related with relief, exist between and inside each island, little is known about the geographic distribution and interactions among species on the archipelago.
The main objectives of this study were to characterize (i) tephritids population dynamics in relation seasonality and host fruits presence and (ii) geographic distribution in relation with temperature and rainfall.
This study was carried out in the three island of Comoros Union (Grande Comore, Mohéli and Anjouan) during two years in 11 sites ranging from 55 m to 855 m above sea level. In each site, flies were collected weekly in 8 traps (4 different lure, twice replicated). Within in site, fruit phenology was recorded weekly.
The invasive species B. dorsalis was the most dominant species followed by Ceratitis capitata. The results showed that the density of the different species was higher during the hot and rainy season than the cold and dry season. Higher densities of B. dorsalis were observed in Grande-Comore compared to Mohéli and Anjouan where the invasion is probably more recent. High densities of B. dorsalis seem related with fruiting of guava, jew plum, mango, orange, and strawbery guava.
B. dorsalis prefers hot and humid areas, while C. capitata prefers dry areas of medium altitude, suggesting niche partionning between the two species after displacement of C. capitata by B. dorsalis in the lowlands.