

The Mediterranean fruit fly *Ceratitis capitata* (Wiedem.): results of monitoring in 2019 in Montenegrin seacoast

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Introduction

The Mediterranean fruit fly *Ceratitis capitata* is a highly invasive species and one of the world's most devastating and destructive fruit pest attacking more than 350 species of fruits and vegetables (Fig. 1). In Montenegro following host plants are registered: citrus (mandarins, oranges, lemon, grapefruit), peaches, figs, persimmon, jujube, apples. The most commonly infested are mandarins, figs and persimmon. In an economic sense, the most important host is mandarin.



Fig. 1. *C. capitata* – adult on mandarin fruit

Material and Methods

Monitoring of *C. capitata* was conducted on the seacoast, in localities from Ulcinj to Herceg Novi. Eight commercial fruit orchards were chosen, both citrus producing orchards and mixed orchards. Two types of attractants and traps were used: a) synthetic, 3 component female targeted attractant marked as Bioulure, placed in Tephri traps and b) para-pheromone Trimedlure used to attract the males, placed in Jackson traps (Fig. 2). Traps were set up at the beginning of July and inspected until the end of November.



Fig. 2. Tephri trap (a); Jackson trap (b)

Results

The first adults were captured in locality Baošići at the last decade of July (2♂♂ in Jackson and 2♀♀ in Tephri traps). Low capture rates remained during August and population started increasing in September and beginning of October, what is in correspondence with the beginning of maturation of mandarins, the most abundant host of *C. capitata* in Montenegro. In this period captured flies were registered in both type of traps in all inspected localities (Fig. 3).

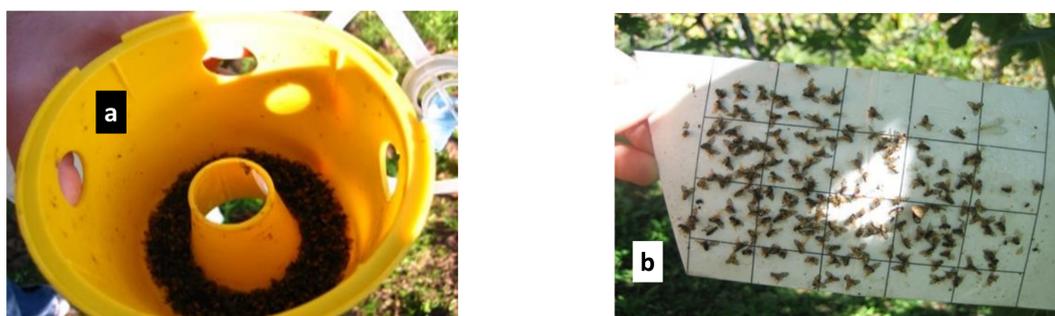
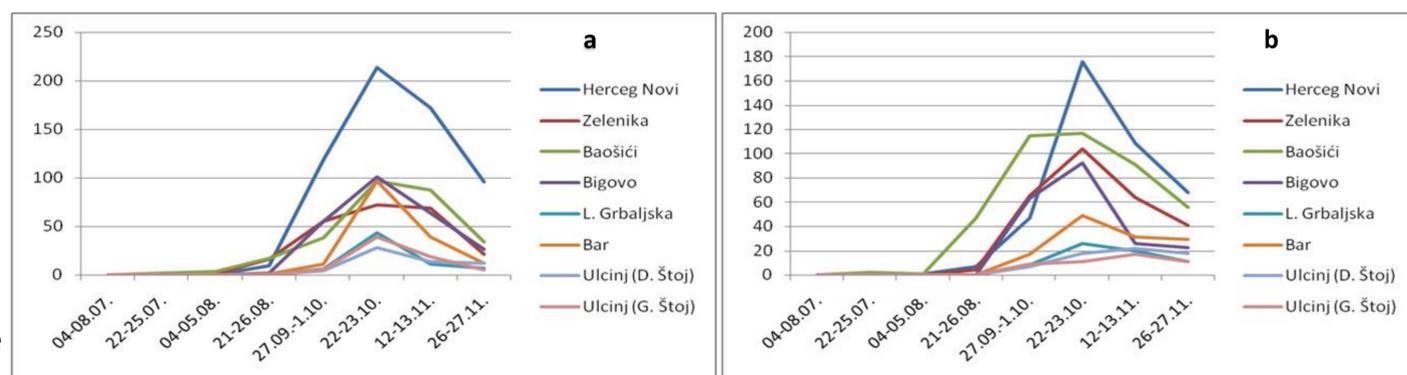


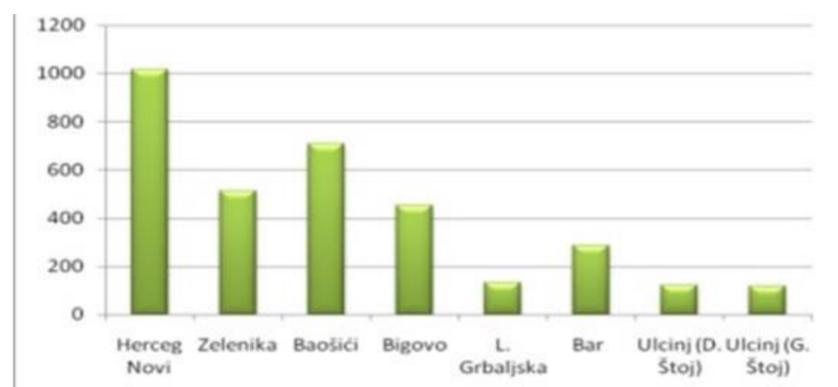
Fig. 3. Adults of *C. capitata* captured in Tephri trap (a) and Jackson trap (b)

The population reached maximum in period from mid-October and remained high to mid-November when started decreasing (Graph. 1).



Graph. 1. Population dynamic according number of captured flies in Tephri traps (a) and Jackson traps (b)

Data from graph. 2 shows that in 2019 the highest number of flies were captured in localities Herceg Novi (1018), Baošići (708), Zelenika (512) - all in area of Boka Kotor Bay, while the lowest captures were in localities Gornji Štoj (116) and Donji Štoj (123), area of Ulcinj. Number of captured flies presented in graph. 2 is total captures in both type of traps in each inspected locality.



Graph 2. The total number of captured flies in each inspected locality

CONCLUSION

In Montenegrin seacoast *C. capitata* has a distinct seasonal occurrence of population fluctuations with summer months with low capture rates which increased during autumn (September), and reached maximum in October. According to the time and number of captured flies localities within Boka Kotor Bay were recorded as the earliest and highest for adult captures. The highest number of captured flies was recorded in localities of Herceg Novi, Baošići and Zelenika. According to the total number of captured files both types of traps/attractants captured similar number of specimens.