

The pheromonal and kairononal activity of the sex pheromone of the maritime pine bast scale

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Abstract: The pheromonal and kairononal activity of the female sex pheromone of *Matsucoccus feytaudi* (Hemiptera: Matsucoccidae) was examined in the maritime pine forests of Portugal, France and Italy, and in the Aleppo pine forests of Israel. A racemic mixture of the sex pheromone was used, (8,10)-3,7,9-trimethyl dodecadien-6-one in a 65/35 EE/ZE ratio. Sticky traps, of two sizes and two designs (delta and plate trap), baited with rubber septa impregnated with 25- 2200 µg of the pheromone, were employed. Small delta traps baited with 220µg were also exposed in red pine stand in Northeastern USA.

Males of *M. feytaudi* were caught in large numbers in the maritime pine areas of examined with the pheromone baited traps even at dosage of 25µg. Male captures were significantly higher with the increasing pheromone load. In the Aleppo pine stands of Israel catches of *Matsucoccus josephi* males in pheromone baited traps did not differ significantly from that in the non-baited traps. Four species of predators were attracted to the pheromone: four species of *Elatophilus* (Heteroptera: Anthocoridae) and one species of *Hemerobius* (Neuroptera: Hemerobiidae) were attracted to the pheromone. In Israel *E. hebraicus* was caught alone, *E. nigricornis* was caught in Italy and the Atlantic coast of France, *E. crassicornis* was trapped in Portugal and *E. inimica* was trapped in Northeastern USA. *H. stigma* was caught in all areas of maritime pine forest. A clear dose response was evident of all four former trapped predatory species. In general, trap size or design did not significantly affect the capture levels of both *Matsucoccus* males and the predators.