



10-min: P-IE, Invasive Species

**Establishment dynamics and parasitism rates of *Ganaspis kimorum* on *Drosophila suzukii*. Evidence from a five-year field release in northeastern Italy**

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**Presenting Author(s)**



**Marco Valerio Rossi Stacconi, PhD**

Researcher  
Fondazione Edmund Mach  
S. Michele, Trentino-Alto Adige, ITA

**Co-Author(s)**



**Asia Colmagro**

Fondazione Edmund Mach  
San Michele a/A, Trentino-Alto Adige, Italy



**Gianfranco Anfora**

Full professor  
C3A - University of Trento  
trento, Trentino-Alto Adige, Italy



**Alberto Grassi**

Fondazione Edmund Mach  
San Michele a/A, Trentino-Alto Adige, Italy

The invasive fruit fly *Drosophila suzukii* (Diptera: Drosophilidae) remains a major threat to fruit production, with its management still relying predominantly on chemical control methods. This dependence raises concerns due to the risks of pesticide resistance and negative environmental impacts. Although integrated pest management (IPM) strategies are under development, available alternatives are currently limited and often ineffective. In invaded regions, natural enemy communities consist mainly of generalist pupal parasitoids, which have shown limited success in

suppressing *D. suzukii* populations. In contrast, the pest's native range hosts more specialized larval parasitoids that help reduce its impact on crops. Following extensive foreign exploration and risk assessment, the larval endoparasitoid *Ganaspis kimorum* (Hymenoptera: Figitidae) was identified as a promising candidate for classical biological control. In 2021, Italy initiated a propagative biocontrol program using a population of *G. kimorum* sourced from Japan. This study presents findings from the first five years of releases conducted at 20 sites across the province of Trento (Italy). We summarize the monitoring efforts carried out to evaluate parasitoid establishment and parasitism rates on both the target pest and non-target species. Results indicate that *G. kimorum* is a highly specialized parasitoid of *D. suzukii* and does not appear to compete with native parasitoids for hosts. Evidence of establishment at multiple release sites, along with signs of range expansion, suggests a positive trajectory for this biocontrol agent. These findings offer important insights into the long-term efficacy and ecological implications of introducing *G. kimorum* for the management of *D. suzukii*.