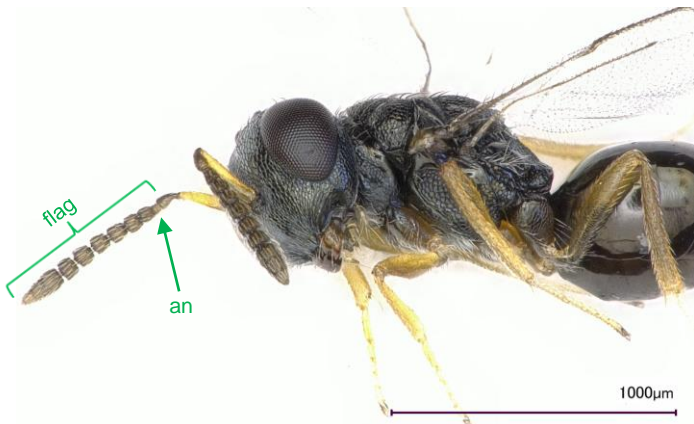


# *Vrestovia fidenas*, a potential parasitoid of *Drosophila suzukii* in its invaded areas

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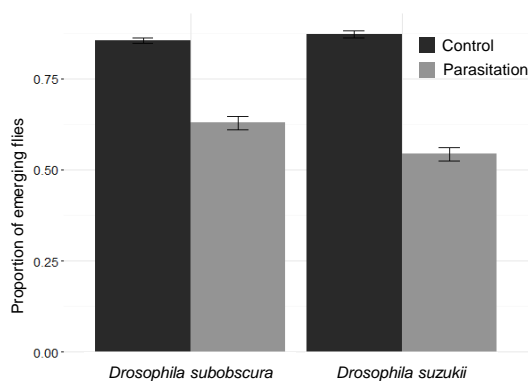
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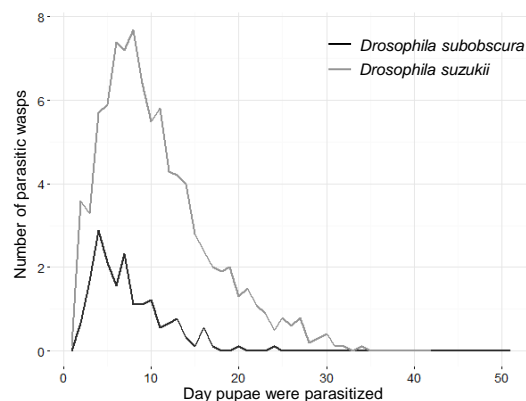
**Figure 1:** Morphological details of *Vrestovia fidenas*: antenna with 11 flagellomeres (flag), including two anelli (an).

## Methods

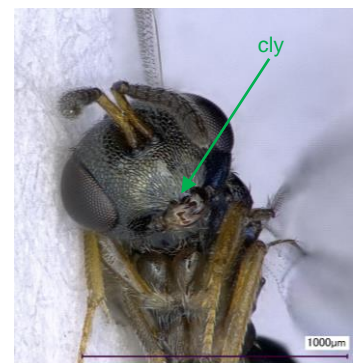
Couples of newly hatched *V. fidenas* were daily offered 20 pupae of either *D. suzukii* or *D. subobscura* until death to assess fecundity and life span ( $n=9-10$ ). Development time and sex of offspring as well as proportion of emerged flies were recorded ( $n=72-610$ ).



**Figure 2:** Mean proportion ( $\pm$  SE) of *Drosophila* emerging during the first 14 days of parasitization.



**Figure 3:** Mean number of parasitic wasps emerging from *Drosophila* pupae parasitized during 24 hours.



**Figure 4:** Head of *V. fidenas* with clypeus (cly).

## Results

- Number of offspring, parasitization rate and female ratio are larger with *D. suzukii* as host (Tbl. 1, Fig. 3).
- Development time of offspring is similar on both hosts (Tbl. 1).
- Emergence of *D. suzukii* is reduced by 46 % after parasitization (Fig. 2).

**Table 1:** Life table parameters (mean  $\pm$  SE) of *V. fidenas* on two different hosts.

Host	<i>Drosophila suzukii</i>	<i>Drosophila subobscura</i>
	parasitoid females	
mean longevity [d]	26.4 $\pm$ 2.50	29.5 $\pm$ 3.50
lifetime fecundity [no]	90.9 $\pm$ 13.31	18 $\pm$ 3.99
development time [d]	20.7 $\pm$ 0.07	20.74 $\pm$ 0.16
female offspring [%]	67.11	55.56
	parasitoid males	
longevity [d]	28.78 $\pm$ 4.73	30.56 $\pm$ 4.19
development time [d]	18.31 $\pm$ 0.08	18.61 $\pm$ 0.17

## Conclusions

Major characteristics to identify the parasitic wasp *V. fidenas* are the form of the clypeus and the number of anelli. It is able to develop on different *Drosophila* species, including the invasive *D. suzukii*. Its performance is even better on *D. suzukii* than on the native *D. subobscura*.

Reference: Bouček, Z., 1961, Beiträge zur Kenntnis der Pteromaliden-Fauna von Mitteleuropa, mit Beschreibungen neuer Arten und Gattungen (Hymenoptera), *Acta entomologica Musei Nationalis Pragae*, **34**, 55-95.