

# TEVIGO ELECTRIC FLY SWATTER

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DEMONSTRATION AND VALIDATION

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## OBJECTIVES

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- Testing the efficacy of one Tevigo fly swatter (Elektrische Fliegenklatsche) in killing *Musca domestica* (house flies).

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## APPROACH

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Adult *Musca domestica* were propelled against the electrified swatter. Mortality was recorded and compared to flies that were propelled against a non-electrified fly swatter.

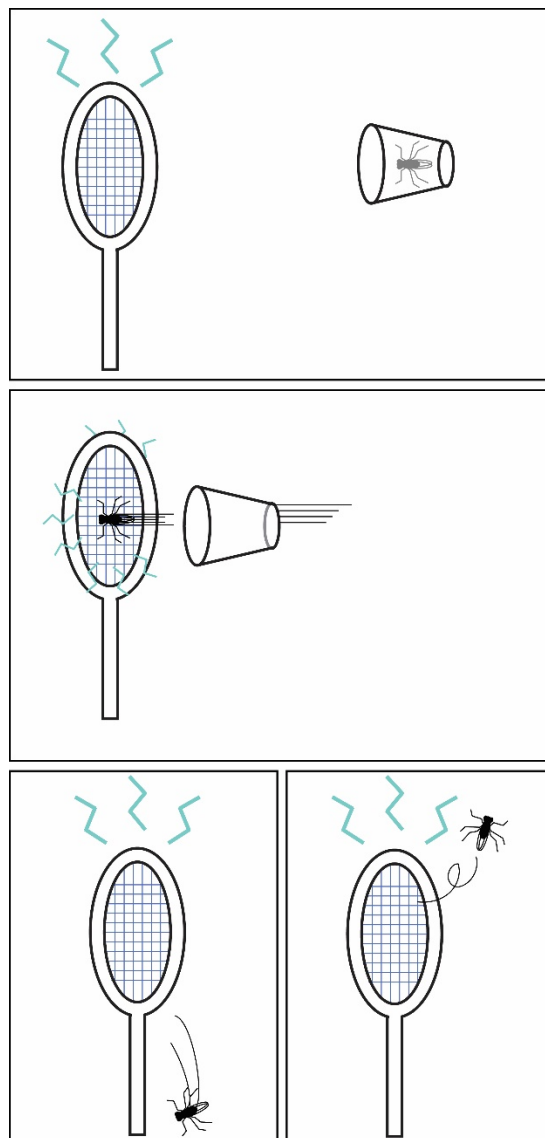


Figure 1. Testing scheme for electric fly swatter.

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## MATERIALS AND METHODS

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### *Mortality assays:*

#### Experimental Parameters

- Four biological replicates
- Three fly swatters were provided by the client.
- The control was a non-electrified swatter.

#### Protocol

1. Flies were briefly anesthetized with CO<sub>2</sub> and transferred into individual cups.
2. Individual flies were propelled against the electrified fly swatter held in vertical direction.
3. Survival rates were determined. Flies that were incapacitated and not able to fly were counted as dead.



4.

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## RESULTS

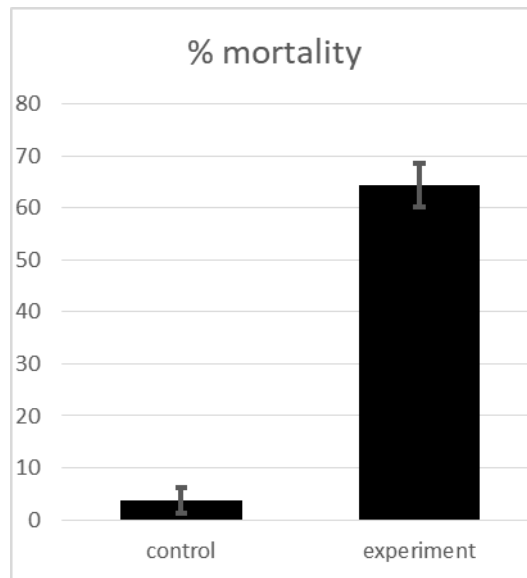
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	Dead	Alive		% mortality
control	2	18		10
control	0	20		0
control	1	19		5
control	0	20		0
A	10	8		56
B	9	6		60
C	12	4		75
D	10	5		67

**Table 1. Mortality rates of individual experiments**

	% mortality	standard error
<b>control</b>	<b>3.75</b>	<b>2.39</b>
<b>experiment</b>	<b>64.00</b>	<b>4.23</b>

**Table 2. Average mortality rates**



**Figure 2. Fly kill rates.** Statistical analysis (two-paired T-test) showed that the difference between experiment and control is highly significant.

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## **DISCUSSION**

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Roughly two thirds of the houseflies propelled against the electric fly swatter got stuck between the outer and inner metal mesh and were immediately electrocuted or incapacitated. The other third bounced off after hitting the outer mesh or the plastic support beams that separate inner and outer mesh and survived.

We have anecdotal evidence that kill rates with mosquitoes are even higher because they are smaller and more likely to become trapped between the two meshes. The fly swatter performed as advertised.

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## **RECOMMENDATIONS**

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None.