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A new method for assessing social learning in *Drosophila*.

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Social learning, the ability to learn from conspecifics, has not been clearly demonstrated within *Drosophila* species. In order to investigate this matter, we developed an acrylic chamber based on the one used by Manfrin *et al.* (1997), which allows us to observe individuals while they watch their conspecific's behaviors.

This observation chamber is a solid acrylic square from which we removed a round arena (Figure 1). This arena is divided into two compartments: one smaller, designed to house the observer; and another, larger, to house up to two demonstrators. We used an aluminum fence as a barrier to divide the compartments. This discontinuous barrier (Figure 1-A) allows the free input of visual, odorous and acoustic stimuli between subjects preventing, at the same time, the observer to directly interfere with the

individuals being observed. The chamber also has two independent entrances where we can aspirate subjects in or out without any harm. As in its original idea, this chamber is bottomless in order to allow sound recordings and its size can be adjusted according to the species. We tested the chamber with males observing a mating couple, aiming to investigate courtship learning. Our tests showed that the observer had its attention concentrated on the couple but could not interfere with their mating, achieving our goals. This method is very handy and simple, not to mention its costs, which are very low. We strongly suggest its use for future researches concerning social learning.

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References: Manfrin, M.H., P.R. Prado, and F.M. Sene 1997, *Rev. Bras. Biol.* 57(3): 349-355.

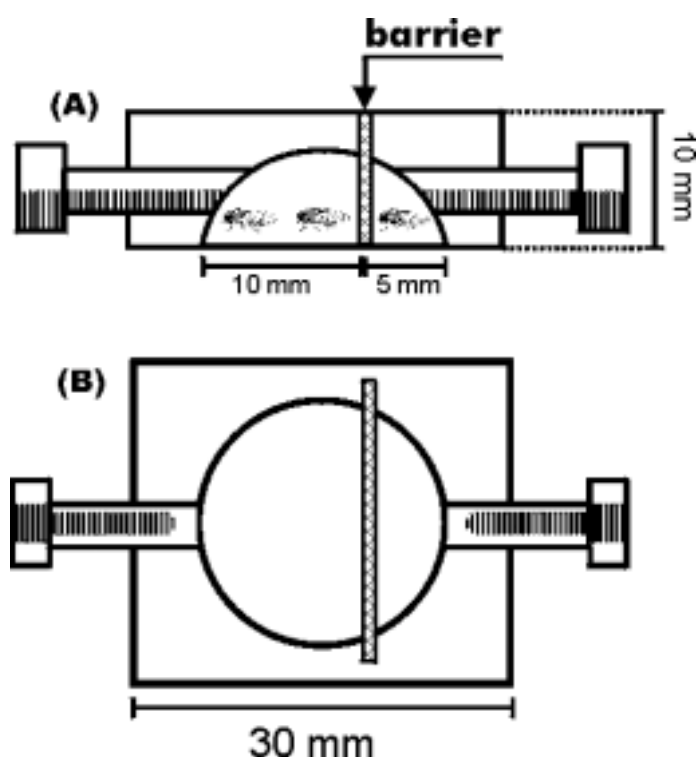


Figure 1. Observation Chamber presented in a cross section (A) and in an upper view (B). The barrier is made of aluminum. Chamber and its entrances are made of acrylic. Sizes may vary according to the species. Represented flies are only demonstrative.