

Evaluation of the BG-Sentinel, a new monitoring trap for mosquitoes, in northern Italy .

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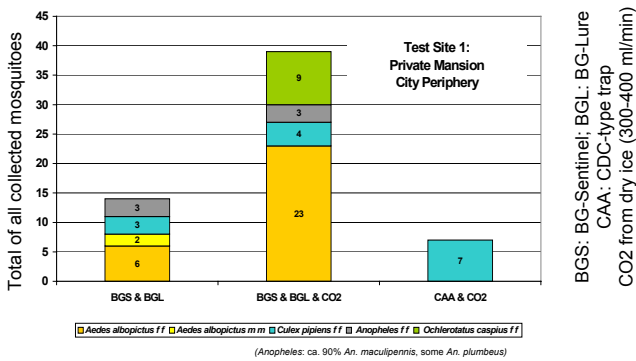
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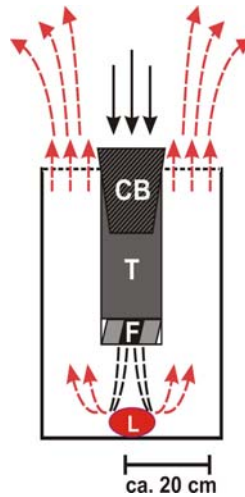
Comparison of the BG-Sentinel with and without CO₂ to a CDC-type trap with CO₂

Experiments were performed in August 2005. Test site 1 was in the garden of a private mansion on the city periphery of Acqui Terme, test site 2 was a small cereal farm with five horses outside of the city. Acqui Terme is known to be colonized by *Aedes albopictus* (*Stegomyia albopicta*).

Traps were put up in the late afternoon and collected before noon of the following day. The experiments at test site 1 were performed according to a latin square design on three positions with three repetitions (i.e. 9 tests per trap). The experiments at test site 2 were performed in a randomized block design, with each trap being tested at two positions (i.e. 2 tests per trap).



BG-Sentinel Monitor Trap



Functional diagram CB: catch bag; T: black tube; F: fan; L: BG-Lure. Arrows symbolize the direction of the airflow; red arrows the attractive air stream which mimics convection currents produced by a warm-blooded host.

Attractants are given off by the BG-Lure (L), a dispenser which releases a defined combination of lactic acid, ammonia, and fatty acids, all substances that are found on human skin. The BG-Lure was originally developed for *Aedes (Stegomyia) aegypti*. Other attractants can be used, depending on the target species.

CO₂ can be added to the air stream as an additional attractant. This is best done from a point source about 20 cm above the catch bag (CB).

Evaluation of the BG-Sentinel without CO₂ as a permanent monitoring tool

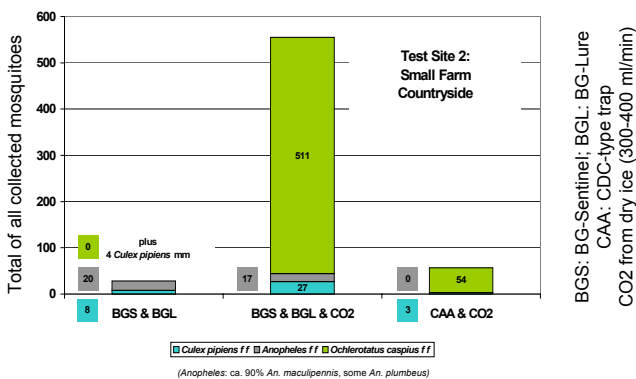
Experiments were performed in Alessandria (three locations), Silvano d'Orba (two locations) and Tortona (one location). Traps were run continuously between August 11 and 25, 2005, with only the BG-Lure as an attractant. They were controlled on the 16th, 19th, 22nd, and 25th. In addition to the BG-Sentinel traps all locations were being monitored during this time with ovitraps.

No *Ae. albopictus* (*St. albopicta*) was detected in Alessandria, but one trap in Silvano and the one in Tortona were positive, although no *Aedes albopictus* (*Stegomyia albopicta*) were detected in the ovitraps at all locations.



BG-Sentinel without & with CO₂

The CAA trap is a CDC-type CO₂ trap used to monitor mosquitoes in Italy.



NO carbon dioxide necessary

