SCIENTIFIC NOTE

SECTAB – A New Device for Tabanid Storage in Field Collections

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SECTAB – Um Novo Instrumento para Armazenamento de Tabanídeos em Coletas de Campo

RESUMO - O artigo descreve a construção de um novo aparato simples, para o armazenamento e transporte de tabanídeos vivos durante as coletas realizadas em campo, evitando a perda de espécimes.

PALAVRAS-CHAVE: Inseto, instrumento, plástico, Diptera

ABSTRACT - The article describes the construction of a simple new device, for the storage of live tabanids during field collections and their transportation to the laboratory, avoiding the loss of specimens.

KEY WORDS: Insect, apparatus, plastic, Diptera

Tabanids are among the free-living adult flies which play a key role as livestock pests (Foil & Hogsette 1994). Tabanidae consists of approximately 4,300 species, from which 1,800 have been registered in the Neotropics (Ferreira & Rafael 2006).

The techniques of insect collection vary according to the objectives and the genera to be collected, and several different types of trap have been developed accordingly (Almeida *et al* 1998). The passive capture of tabanids can be obtained on traps such as "canopy" (Schreck *et al* 1993), "Nzi" (van Hennekeler *et al* 2008) and "Malaise" (Krolow *et al* 2007). However, they can be captured actively by manual collection using glass tubes as collectors. After collection, the live specimens must be stored until they are taken to the laboratory.

Plastic or glass vials covered with a polyamide/nylon cloth have been generally recommended for the storage live, field-collected insects (Marcondes 2001). However, these containers are unsecure as the rubber bands used to hold the cloth that covers them can break or the cloth can be tore or perforated by the well-developed proboscis of some species of tabanid. Furthermore, the difficulties in transferring the collected insects from the collector tube to the flask leads to an average loss of 5% to 10% of the specimens. This study describes a new device for the proper storage and field transport (SECTAB) of collected insects.

The device was developed by researchers of the Universidade do Estado de Santa Catarina (UDESC), during a research project on the seasonal variation of the tabanid population on the Santa Catarina plateau - Brazil.

The SECTAB device consists of a plastic flask (with cover), 17 cm in diameter and 16 cm in height. A hole of 4.7 cm was made in the cover to contain a smaller flask (also with a cover), 5 cm in diameter and 6 cm in height, like a universal collector of biological samples, from which the bottom was removed (Fig 1A). Silicon glue was used to fix the smaller flask into the cover of the larger one, in such a way that 2.5 cm of the former protruded from the latter and 3.5cm were within it. Small perforations were made in the cover of the larger flask for ventilation, avoiding the insect premature death (Fig 1B).

After an active capture of tabanids with glass tubes, these are coupled to the device in a very simple way. The double flask described is inverted, the cover of the small one is removed and the glass tube inserted into it. The adult tabanids present natural negative geotropism, what makes very easy their transfer from one flask to another and reduces their chances of escape (Fig 1C).

The efficiency of SECTAB was demonstrated by monthly collections made over a period of two years, with more than 600 specimens collected, in which the loss of tabanids were greatly reduced to less than 1.0 %.

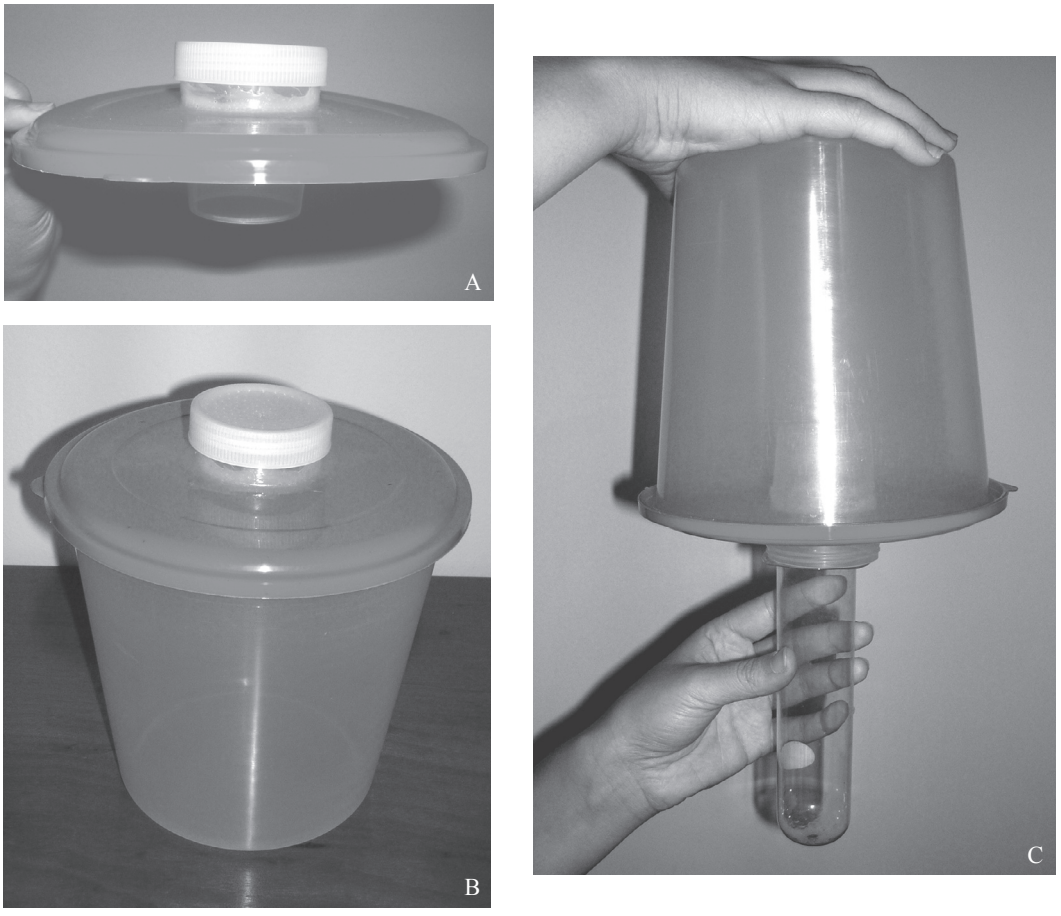

Fig 1 SECTAB storage system for tabanids. A) Horizontal view of large cover showing the smaller flask inside it, B) Complete view of the device, C) Coupling of the SECTAB device and the collecting tube.

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