



Species Biodiversity and taxonomy

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AWARDS

Biodiversity and taxonomy are closely related and are dependent on each other. Biodiversity can only be determined by having a vast knowledge about the taxonomy. On the other hand, selection of proper sampling methods is important to scrutinize the diversity of a particular group of fauna in a particular habitat. Insects being the largest group of animals, hence a large number of sampling techniques are employed for their collection. Among various sampling techniques sweep net, light trap, pitfall trap, Winkler sampling and malaise trap are common and very effective for the collection of different insect groups. Among the above mentioned insect collection methods Malaise trap is commonly used for the sampling of low flying insects. In combination with other sampling techniques Malaise traps have been used widely for insect sampling. While scrutinizing the published literature, there is not an extensive review about the different aspects of Malaise trap. We are presenting an overview of Malaise trap in the present paper. Swedish Hymenopterist, Dr. Rene Edmond Malaise was the first to develop a Malaise trap in 1934 in Burma and later on three types of Malaise traps were proposed viz. original unilateral, a bilateral type equipped with a lateral collector and other one with a collector in the center

It is relatively unbiased insect collection trap for flying insects. Malaise traps are commonly used standardized method for sampling of flying insects. From last few decades many designs of Malaise trap have been developed. Among which, smaller Townes design and larger Gressitt design are

prominent. The principle structure of Malaise trap consists of a tent with two wide openings, one at front and second one at the back and exactly opposite to the first one. In the centre is a fabric barrier to intercept the flying insects. While trying to escape, insects move upwards and finds themselves trapped into the collecting jar filled with a killing agent which is fitted right above at the summit. The arrangement of fabric is installed on four logs or poles and supported by ropese. Dr. Henry Keith Townes devised a simple design of Malaise trap, which is most common in use due to its handy design and light weight. The trap is open at both the ends with a central diaphragm and a lateral collector at the summit. The colour of the trap is usually black and white or completely black. Most insects being positive phototropic, after entry into the trap, hit the diaphragm and moving upwards to a light opening and eventually gets trapped into the collector. The efficiency of Malaise trap virtually depends up on mesh size, microhabitat and design of the trap. Among the above three factors, trap design is most important along with placement of the trap in correct position. The mesh size should be very fine and depends up on the size of the target insect to be collected. Commercially available traps mostly have an opening of (total sampling surface of both the sides) of 3m², roughly a sampling surface of 1.92 m² per length of diaphragm.

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