The Light-Weight Malaise Trap by H. Townes

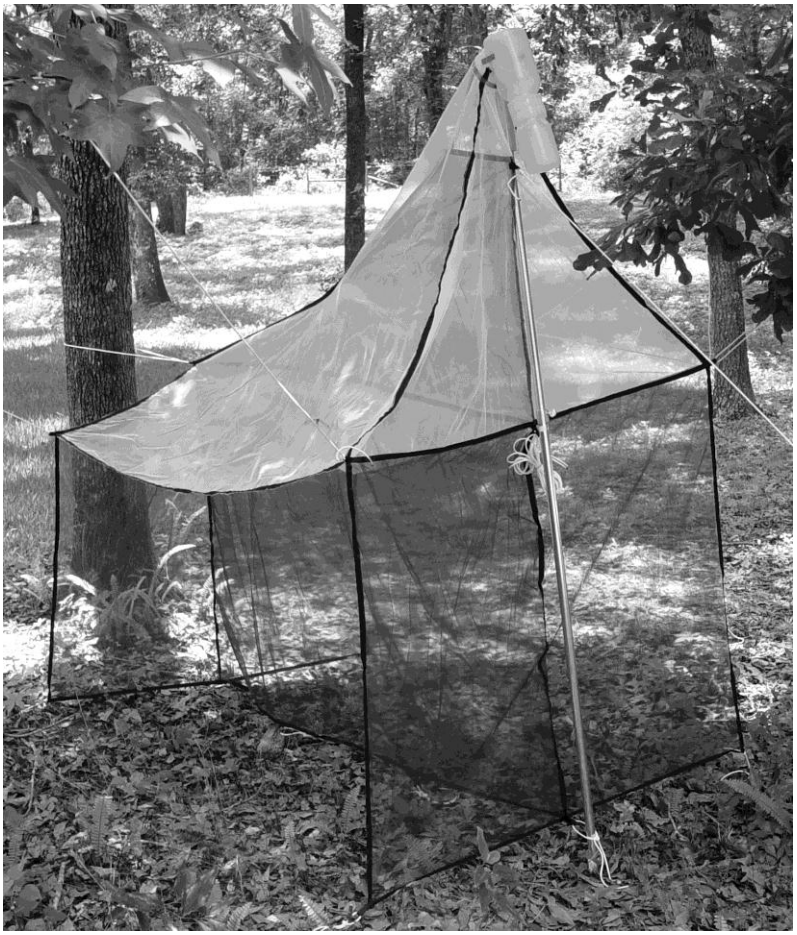
Model 3412

Instructions

The following comments are offered to help you make efficient use of your trap. A list of references from the literature on insect flight traps is provided.

Set Up

To set up the trap, 4 short stakes (ca. 4 feet long) made of wood, aluminum, or PVC plastic are used at each corner of the roof. A slightly longer pole (ca. 4'-6") is used at the centerline of the trap at the end opposite the collection head. A longer pole (ca. 7'-6") is inserted into the bottom of the collection head to hold it up. Adjust the tie-down ropes so there are no large folds in the roof material that will prevent insects from entering the collection head.



Killing agents

The catch will eventually die within the dry heads from exhaustion or heat as the bottle acts as a greenhouse. However, when allowing the catch to die slowly, delicate specimens tend to be dismembered by the death throws of larger insects and everything is covered with Lepidoptera scales. For these reasons, some kind of killing agent added to the lower bottle is recommended. Four common agents are:

(1) About one-half pint of 95% ethyl or isopropyl alcohol.

(2) A plastic strip or tape containing DDVP, e.g., Hercon VaporTape, available from Great Lakes IPM (516) 268-5693. Paper strips in the container are useful to keep things dry.

(3) 10-15 g KNC encapsulated within plaster of paris; NaCN is better in humid areas. Please remember, cyanide is very dangerous and more than one entomologist has been killed in accidents while using it. Paper strips in the container are useful to keep things dry.

(4) Fill the jar with paper strips and add a small vial of a fumigating insecticide such as ethyl acetate dispensed with a wick inserted through a hole in the vial lid.

There are advantages and disadvantages to each of these methods and there are other agents. If you are not sure what to use, try a DDVP product. See also Southwood's discussion (1966, see references). Removing the catch is accomplished by screwing off the lower one-pint jar from collection head.

Trapping Locations

Where the trap is placed is not determined solely by what you intend to catch. Give consideration to natural flyways, e.g. along the edges of fields and roads within woods. If applicable, place the trap perpendicular to the direction of flight, e.g. butterfly migration or the diurnal movement of mosquitoes to and from a wooded area (particularly see Gressitt & Gressitt 1962). Dr. Henry Townes recommends placing the traps next to bushes. Remember, the trap will catch good numbers anywhere but moving it every few days will reveal better places that others for a particular genus or species. Malaise (1937) gives some pertinent pointers on trap placement. For considerations concerning baiting the trap, e.g. CO2 for biting flies, see the references.

Useful References

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