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Short Communication

Jelled Alochol: An Altnerative Medium for Three Dimentional Permanent Mounting of Arthropod specimens

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Although liquid preservation is the easiest way to keep the arthropods as they are; however, the specimens sink to the bottom and it becomes difficult to position them for studying the particular features. We here present an alternative permanent mounting procedure based on hair gel and absolute ethanol which provides a semi-solid preservation with an advantage of rightly positioned to study the three-dimensional geometric features for taxonomic identification. The method also provides least turbidity through efficient maceration. The method is efficient and least time consuming and can be adapted for 3-D taxonomic studies.

Keywords: Liquid preservation; Arthropods; Three-dimensional geometric shape; Hair gel

INTRODUCTION

Most studies in specimen preservation have only been carried out in a small number of areas such as taxidermy, solid preservation and liquid preservation. However, far too little attention has been paid in semi-solid preservation (Wegner 2004). This new method seeks to remedy the turbid problem that has been observed in liquid, semi-solid (hand sanitizer) and solid preservation and addresses a novel approach to produce cheap, durable and high quality

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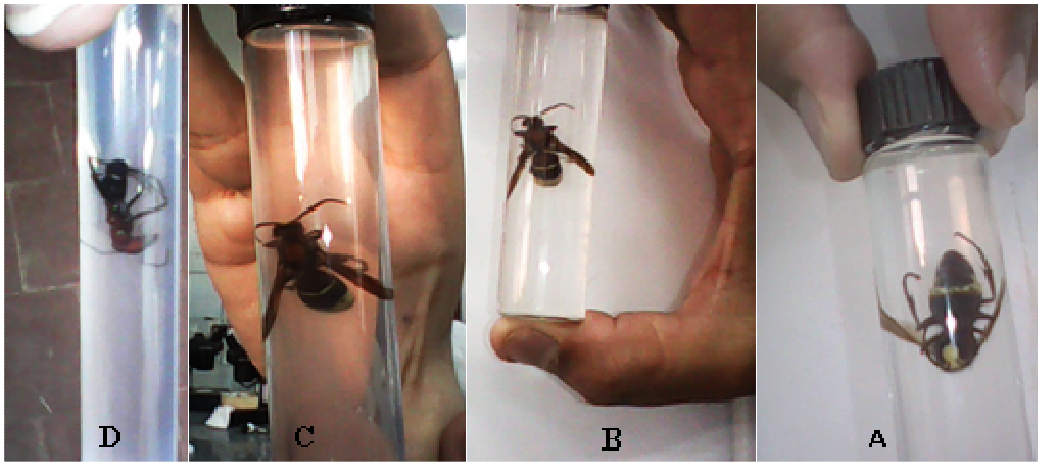

Figure 1 (A-D): Different types of insects suspended in the Jelled Alcohol

Figure 2. Hair Do X^2 evaluated as arthropod specimen permanent display

specimen preservation for using in both museum preparation and studying contexts.

METHODS

The following protocol was used to provide the best results:

1. Kill the animal either by freezing or chemicals.
2. Puncture the cuticle with a fine needle to allow the caustic agent to penetrate the body.
3. Macerate the specimens in order to remove the external secretions and internal contents by placing them in 10% Sodium hydroxide (caustic soda; NaOH) for 12-24 hours at room temperature. Alternatively, boil the specimens in hot Sodium hydroxide for 5 minutes.
4. Neutralize the alkalinity by adding a few drops of Glacial acetic acid
5. Wash for 20 minutes in running tap water
6. Dehydrate the specimens in ascending grades of alcohol (70–100%) for 1 hour each.
7. Place the beaker that contains jelled alcohol in a ration of 1:2 (hair gel: absolute ethyl alcohol) onto Hot plate in order to ensure proper mixing of the jelled alcohol's components and complete removal of air bubbles.
8. Transfer a small amount of jelled alcohol into another beaker.
9. Place it on the hot plate
10. Place the specimens into the small beaker and wait for 20 minutes to assure complete removal of air bubbles from inside the specimens and surroundings.
11. Transfer the saturated specimens into another jelled alcohol contained beaker at a ratio of 1 to 1 (hair gel: absolute ethyl alcohol) for 10 minutes.
12. Fill screw cap vial with the jelled alcohol.

13. Position the specimen toward the center of the vial with a probe.
14. Top the vial off with more jelled alcohol.

RESULTS AND DISCUSSION

The collected specimens from different localities are deposited in jelled alcohol after processing for long-term preservation and future access **Figure** 1 (A, B, C and D) and **Figure** 2**.**

The most striking result to emerge from the data is that exoskeletally-punctured arthropods macerated in the caustic agent; 10% Sodium hydroxide showed no turbidy in all types of preserving media ranging from liquid to solid preservation. In addition to its simplicity, safety, comparability to 70% ethanol, 10% Formalin and hand sanitizer in preservation (Wegner 2004; Borror et al., 1989), it has the added advantage of being efficient turbidity removal. We feel that this was set up by authors will be the top-first not only in the studying context but also in the preparing museum specimens.

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