FURTHER NOTES ON PREPARATION OF EXUVIAE OF PARASITIC HYMENOPTERA[1]

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ABSTRACT: Modifications of previous methods for preparing cast exuviae of larval parasitic Hymenoptera are: 1) use of Euparal rather than Hoyer's as a mounting medium, 2) careful removal of the exuviae with forceps to minimize ultrasonification, and 3) use of cold concentrated KOH or NaOH in cases where cocoon contents are cemented together and refractory to ultrasonification.

Since publication of an earlier paper on preparation of cast larval exuviae (Wahl, 1984), additional experience has led me to suggest some alternative methods.

I do not advocate the use of Hoyer's as a mounting medium. Conversations with curators have cast doubts upon the longevity of such slides, even when "properly" rung. Euparal is very satisfactory, both for its undoubted permanence and ease of use. After clearing, the final manipulation of the exuviae is done in 70% ethanol, after which it is transferred to 95% ethanol for several minutes, and then mounted directly in Euparal. A week (approximately) of curing the slide at 40-50°C is necessary. If small bubbles of air are trapped under the cover slip, this heating period will cause either their migration to the outer edge of the cover slip or their resorption.

The typical contents of an ichneumonoid cocoon consist of the meconium (a large yellowish or brownish body of feces within the peritrophic membrane), the pupal exuviae (appearing as tighly wadded translucent cuticle with associated white fecal pellets), and the larval exuviae (light to dark brown in color). The latter are usually extended to some extent and attached (or wound about) the other contents. Careful manipulation with fine forceps will often suffice to remove the larval skin without resorting to ultrasonification of the cocoon contents. This reduces both the preparation time and the chances of tearing or otherwise damaging the fragile larval exuviae. When the cocoon contents are tightly bound together in a homogeneous mass, however, ultrasonification should be used to both loosen the components and get rid of fecal matter.

Occasional specimens will be found that have the cocoon contents firmly cemented together into a dark brown object that is resistant even to ultrasonification. Judicious use of cold concentrated KOH or NaOH

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gives excellent results in these cases. One pellet of KOH or NaOH is dissolved in two milliliters of water and the cocoon contents are placed in this solution for 15-20 minutes. This is usually sufficient to loosen the cocoon contents and allow the larval exuviae to be removed. The exuviae are then placed in a weak acidic solution (I use one drop of glacial acetic acid in two milliliters of water) to neutralize the previous basic solution, and then transferred to Nesbitt's for clearing.

LITERATURE CITED

Wahl, D. 1984. An improved method for preparing exuviae of parasitic Hymenoptera. Ent. News 95: 227-228.

SOCIETY MEETING OF APRIL 19, 1989

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The other main attraction of the evening was the presentation of the Calvert Prize to David Zonies, a ninth grade student at North East High School in Philadelphia. He displayed his project concerning the life-shortening effects of ultraviolet radiation on *Drosophila melanogaster.* The first runner-up, Danielle Anctil a ninth grade student at Upper Dublin High School in Fort Washington, Pennsylvania, displayed her project on the wood preferences of termites.

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SOCIETY'S INSECT FIELD DAY

The third annual Insect Field Day of The American Entomological Society was held for members and friends of the society on Saturday, June 17, 1989, at Lebanon State Forest in the New Jersey pine barrens. The primary purpose of these field days is to conduct an activity that may help to stimulate interest in insects among amateurs and students, some of whom may be budding entomologists. A total of 76 persons, including 64 adults and 12 children, attended the event which featured insect displays, field trips, and informational programs. -H.P.B.

ACID-FREE PAPER

Effective with this current, September - October, 1989 issue, ENTOMOLOGICAL NEWS is now being printed on acid-free paper. -H.P.B.