


KEY WORDS: Ancylostoma caninum, Necator americanus, hookworm, nematode larva.

Although large numbers of nematode larvae can be obtained via charcoal culture, they are often contaminated with organic debris and are therefore potentially unsuitable for biochemical studies. To circumvent the problem of contamination, investigators have attempted to separate larvae from fecal sediment by either centrifugation through ficoll-sodium metrizoate (Damian, 1976) or via filter paper cultures in petri dishes (Cross and Scott, 1961; Burren, 1980; Mueller et al., 1989). In the 1950's, Harada and Mori described a method whereby hookworm larvae migrate down filter paper placed in a con-
Mori, 1955; Komiyama and Yasuraoka, 1966; Faust et al., 1970). The method is also acceptable for the development of some trematode and cestode larvae (Beaver et al., 1964), but it suffers from 2 drawbacks: it is both time consuming to apply feces to multiple filter paper strips and space consuming to house multiple racks of test tubes.

These problems are alleviated by the apparatus illustrated in Figure 1. Feces are spread thinly onto the top two-thirds of Whatman number 1 filter paper. The Whatman sheets are fastened with tape onto both sides of 8 plates that slide in and out of a 20- × 20- × 10-cm box and rest on a 1-cm shoulder. Thus, a large surface area of nearly 6,400 cm² can be confined to a small box that fits into a bench-top incubator. The top of the filter paper was not routinely cut off after the first day of culture, although in some instances this may improve the yield of larvae. Approximately 300 ml of water containing 30 mg/liter mycostatin is poured in the vessel until the level is just below the fecal layer. The spigot drains water containing the active third-stage larvae. The chamber is refilled each day by pouring the same volume of water through a small funnel inserted between the plates, away from the feces. A lid with holes at the top permits air exchange.

Figures containing 800 eggs/g applied to 2 culture boxes first yielded third-stage Ancylostoma caninum larvae on days 4–5 and yielded a maximum number of 3,700 larvae on days 7–8 at 27°C. Necator americanus larvae were also recovered from infected hamster feces.

Water containing the larvae is passed through a 60-mesh sieve and then through double-layer cheesecloth to remove minor particulates, including small pieces of filter paper. Fine particulates that pass through the cheesecloth are removed by centrifuging the larvae in an eppendorf tube—the particulates form a pellet along the side of the tube and larvae sink to the bottom. Larvae are routinely washed 4–5 times with water or defined medium containing antibiotics (1,000 U/ml penicillin and 1 mg/ml streptomycin) prior to biochemical analysis.

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CALL FOR PAPERS

1990 Student Presentation Competition

The Helminthological Society of Washington is sponsoring the second Student Presentation Competition during its monthly meeting on Wednesday, 10 October 1990 at the Uniformed Services University of the Health Sciences in Bethesda, Maryland.

Eligibility: Any undergraduate or graduate student registered in a college or university degree program at the time of the presentation is eligible to compete for this award.

Conditions: Although multiple authorship is allowed, the project on which the paper is based must be substantially that of the student. The student must be the senior author and present the paper.

The presentation must be on a parasitological subject.

A student may compete with only a single presentation.

An abstract, which is limited to a single, double-spaced, typewritten page, must be provided. The abstract page also must contain the title, author(s), and institutional affiliation(s).

Presentation will be limited to 10 min. There will be approximately 5 min for questions and discussion between each presentation.

Membership in the Helminthological Society of Washington is not required.

Deadlines:

15 Aug 1990 Submission of abstract as described above together with a completed application form signed by an advisor or university official certifying the student status of the proposed presenter of the paper.

1 Sep 1990 Notification of acceptance of paper for presentation at the 10 October 1990 meeting.

10 Oct 1990 Student Presentation Competition at the 613th Meeting of the Helminthological Society of Washington.

Selection of Presentations: A maximum of 8 student presentations will be selected for the competition. The selection of an abstract will be based on the organization of the abstract, originality of the work described, and its potential contributions to parasitology.

Judging of Presentations: The presentations will be evaluated by a panel of judges on the following bases: organization, techniques, originality, contribution, interpretation of results, and knowledge of the subject.

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