Since the same plastic base was used for both ribbons and flakes, the main factor in the greater effectiveness of the flakes was probably the increased surface area. It is likely that the initial effectiveness was due to the release of the temephos present on the surface of the plastic base, while the lack of prolonged effectiveness was due to an insufficient migration of the temephos from the plastic matrix.

Literature Cited

Kottkamp, W. B., R. H. Roberts and M. V. Meisch. 1981. Efficacy of three pyrethroids as larvicides against riceland mosquito larvae in field plots. Mosq. News 41:382–383.

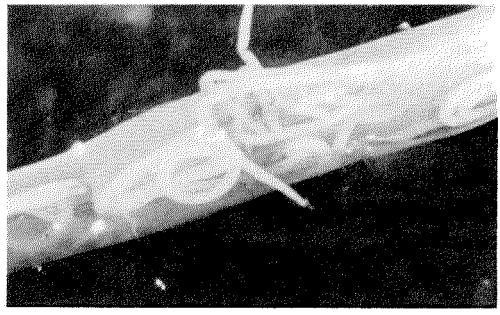

Fig. 1. *Romanomermis culicivorax* along leaf sheath and inside hollow portion of plant stem debris.

ASSOCIATION OF PLANT DEBRIS AND *ROMANOMERMIS CULICIVORAX*, A NEMATODE PARASITE OF MOSQUITOES

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The mermithid nematode, *Romanomermis culicivorax* Ross and Smith, has been studied extensively in the laboratory as a biocontrol agent of mosquito larvae. However, there still remain substantial gaps in our knowledge of the bionomics of this nematode under field conditions.

In studies to determine the depth of penetration by postparasites and adults of *R. culicivorax* in Louisiana soils, we unexpectedly encountered great difficulty in attempting to retrieve a predetermined number of nematodes from soil cores collected from fallow rice fields. The cores were established by forcing polyvinylchloride pipes (10 cm × 27 cm) into the soil and subsequently placing a known number of nematodes on the soil surface inside the pipes. The cores were left undisturbed for ca. 1 wk to allow the nematodes to penetrate into the soil. Following the exposure period, the pipes with the soil cores were removed from the field and taken to the laboratory. Each core was removed from the pipe and transversely sectioned along its entire length at 2 cm intervals. The individual portions were subjected to a soil washing process and strained through a series of graduated sieves.

Because of the consistently low percentage of retrieved nematodes, a closer examination was made of the soil and plant debris remaining in the sieves following the soil washing process. This examination revealed a substantial number of nematodes entwined among themselves and plant debris which inhibited their passage through the smaller mesh sieves. It was not uncommon also to find nematodes within the hollow portions of plant stems present in the soil samples. For example, a longitudinal incision was made along one side of a stem and several nematodes were removed. Nematodes were also found in other hollow stems as well as in between the interfacial spaces of leaf sheathes and stems (Fig. 1). After removal from the plant debris the nematodes were positively identified as *R. culicivorax*.

This is believed to be the first report associating *R. culicivorax* with plant debris in riceland soils. These initial observations indicated that hollow plant stems were used as harborage by some nematodes. It is not proposed that an obligatory relationship exists between *R. culicivorax* and plant debris or even that there is a possible association with living plant tissues. However, we want to alert other researchers to the difficulties that may be encountered if retrieval of nematodes from soil is involved in a proposed study.

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FIELD EVALUATION OF *BACILLUS THURINGIENSIS* VAR. *ISRAELENSIS* FOR CONTROL OF *AEDES TAENIORHYNCHUS* IN SALT MARSH POOLS[1]

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INTRODUCTION

Bacillus thuringiensis var. *israelensis (Bti)* was originally isolated from soil samples taken from mosquito-producing sites in Israel by Goldberg and Margalit (1977). Laboratory tests have shown the delta-endotoxin of *Bti* to be extremely toxic to mosquito larvae (de Barjac 1978, Garcia et al. 1980). Field data are limited, however, regarding the efficacy of

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