

# THE OCCURRENCE OF NEMATODES IN THE FAMILY BLEPHAROCERIDAE (DIPTERA)

D. A. CRAIG,

Department of Zoology, University of Canterbury.

Nematodes are known to occur as parasites of many groups of insects, but apart from a specimen collected by L. J. Dumbleton, have not been reported from New Zealand Blepharoceridae.

Pupae and adults of Blepharoceridae collected at Arthur's Pass, Canterbury, during the period December 1962 to June 1963, have been found to contain nematodes of the family Mermithidae. These have been further identified by Dr W. C. Clark, as belonging in the genus **Agamomermis**. As yet nematodes have not been found in the larvae.

Mermithids were found in two of the three species of Blepharoceridae collected at Arthur's Pass. Although many pupae and adults were examined, only 35 **Neocurupira campbelli** (Dumbleton), and 2 **Peritheates turrifer** (Lamb) contained nematodes, while **Neocurupira hudsoni** (Lamb) showed no signs of parasitism.

The number and size of the nematodes varies, but no more than three have been found in any one host. There is a tendency for nematodes that occur singly to be larger, 19-30 mm. in length, while those that occur in numbers of two or three are smaller, 15-23 mm. The diameter of all the nematodes is .15-.25 mm. Both **N. campbelli** and **P. turrifer** pupae are 4-5 mm. long and 2.0-2.5 mm. wide.

The effect of the nematodes on their hosts is variable. Some parasitised pupae contained well developed adults, while others showed a complete displacement of pupal tissues. All parasitised adults were active, but while males and some females showed no apparent effect, other females contained little else beside the nematodes.