FILTER FLY LARVA (PSYCHODA ALTERNATA) 
FROM HUMAN SPUTUM

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Filter flies (Diptera, Psychodidae) are common pests around homes
(Mallis 1960) and sewage disposal plants (Scott 1961). They are reported
infesting the human bladder (Chin 1959) and stomach (Okada 1927).
Bronchial asthma caused by filter fly adults is reported (Ordman 1946).

In July 1963, a mature larva of Psychoda alternata Say (Fig. 1) was
recovered from the sputum of a man in Macon, Georgia. The source of
this infestation is undetermined. A mature larva would be 11-17 days old
based upon 70°F developmental studies. The recovered larva was not
noticeably damaged or digested.

Psychoda alternata occurs from Florida to Massachusetts west to Wash-
ington and California. It breeds in polluted shallow water or highly moist
organic solids, especially sewage filters, exposed sewage, plumbing traps,
water pipes, wash-water overflow, compost, and bird’s nests.

The female lays a gelatinous mass of 20-100 eggs which hatch in 32-48
hours. Larval stages occupy 9-15 days. The pupal stage requires 20-40
hours.

Adults are weak fliers. They rest in shaded areas or on foliage during
the day. They feed on nectar or polluted water, are attracted to lights,
and have been reported entering houses in large numbers.

![Image of Psychoda alternata larva]

mandible air tube

Fig. 1. Psychoda alternata, mature larva.

LITERATURE CITED

Chin, Y. T. 1969. (Larvae of Psychoda urinated out from a male child

York, 1132 p.

Okada, J. K. 1927. (A new case of digestive tube myiasis caused by the
larva of Psychoda f-mentata Curt.). Ann. Par. Hum. Comp. 5:
105-106.

Ordman, D. 1946. Bronchial asthma caused by the trickling filter fly

Scott, H. G. 1961. Filter fly control at sewage plants. Sanitarian 24:
14-17.