KITIKMEOT HEALTH AND SOCIAL SERVICES BOARD
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File # 500-100-15

January 14, 2000

RECEIVED
JAN 17 2000

Toni Peck
Administrative Officer
Hamlet of Gjoa Haven
Gjoa Haven, Nunavut

RE: Larvae in Community Water Supply

The insect specimen that you recently sent to me has been identified by the University of Alberta as a midge fly larva or bloodworm as it is often called. I am enclosing an information sheet on its habits. The adult fly lays eggs during the summer months; the eggs hatch into larvae which remain active in fresh water over the winter; the larvae then pupate and emerge as adult flies in the spring, and the cycle repeats itself. They are of no public health significance although their presence in the drinking water supply is certainly objectionable.

By copy of this letter I am requesting that Kojo Kumi, Municipal Engineer for Community Government and Transportation, provide you with some short-term solutions. As I am not aware of any previous intrusion of this nature, this may prove to be a one-time occurrence. However, if it persists, a more permanent, egineered solution such as filtration may be in order.

Should you have any questions or comments regarding this matter, please do not hesitate to contact me at (867) 669-6722.

Robert Phillips, CPHI(C)
Senior Environmental Health Officer

cc. Kojo Kumi, Community Government and Transportation
Nurse-In-Charge, Gjoa Haven
Bruce Trotter, Department of health & Social Services
Stella van Rensburg, Kitikmeot Health & Social Services

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PC	✓
LA	Jan17/00
OM	✓
TA	✓
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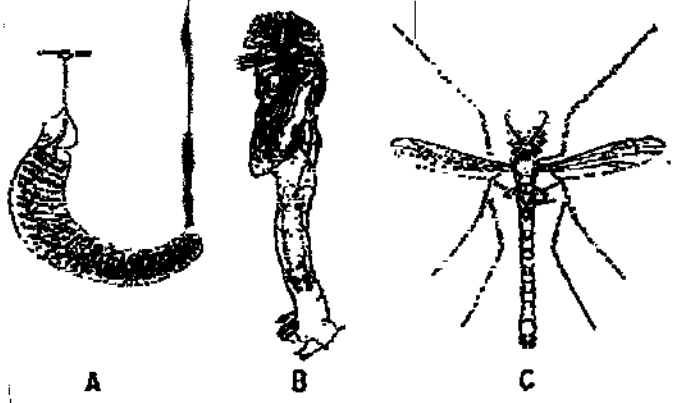

Fig. 442. A midge, *Chironomus plumosus* (Linn.). A, egg mass; B, pupa, lateral view, with the larval skin not completely shed; C, adult male. (Courtesy of Branch.)

ration, and the water in tree holes. Those occurring along the seashore apparently breed in the intertidal zone. The feeding habits of the larvae are not well known, but they are probably scavengers.

FAMILY **Chironomidae**—Midges: These insects are to be found almost everywhere. They are small (some are very small), delicate, somewhat mosquitolike in appearance (Fig. 442 *C*), and the males usually have the antennae very plumose. They often occur in huge swarms, usually in the evening, and the humming of such a swarm may be audible for a considerable distance.

The larvae of most midges (Fig. 443 *B*) are aquatic; a few occur in decaying matter, under bark, or in moist ground. Most of them are scavengers. Many of the aquatic forms live in tubes or cases. The larvae of some species are red in color, due to the presence of haemoglobin in the blood, and are known as bloodworms. Midge larvae swim by means of characteristic whipping movements of the body, something like the movements of mosquito larvae. Midge larvae are often very abundant and are an important item of food for many freshwater fish and other aquatic animals.

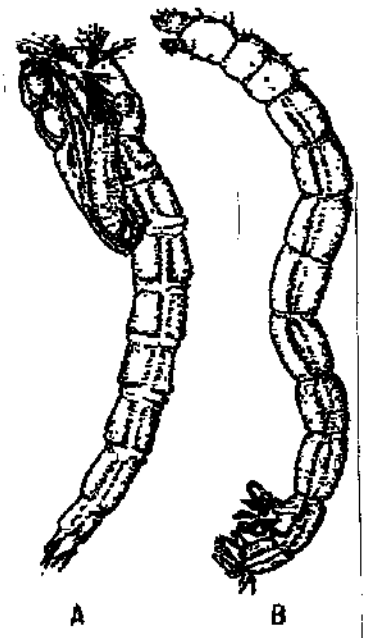

Fig. 443. Pupa (A) and larva (B) of *Chironomus tentans* Fabricius. (Courtesy of Johannsen and the Cornell University Agricultural Experiment Station.)

FAMILY **Simuliidae**—Black Flies or Buffalo Gnats: The black flies are small, usually dark-colored insects with short legs, broad wings, and a humpbacked appearance (Fig. 444). The females are blood-sucking. These insects are vicious biters and are serious pests in some sections of the country. The bites often cause considerable swelling and sometimes bleeding. Black flies sometimes attack livestock in such numbers and with such ferocity as to cause the death of the livestock, and there are records of human deaths caused by these insects. Black