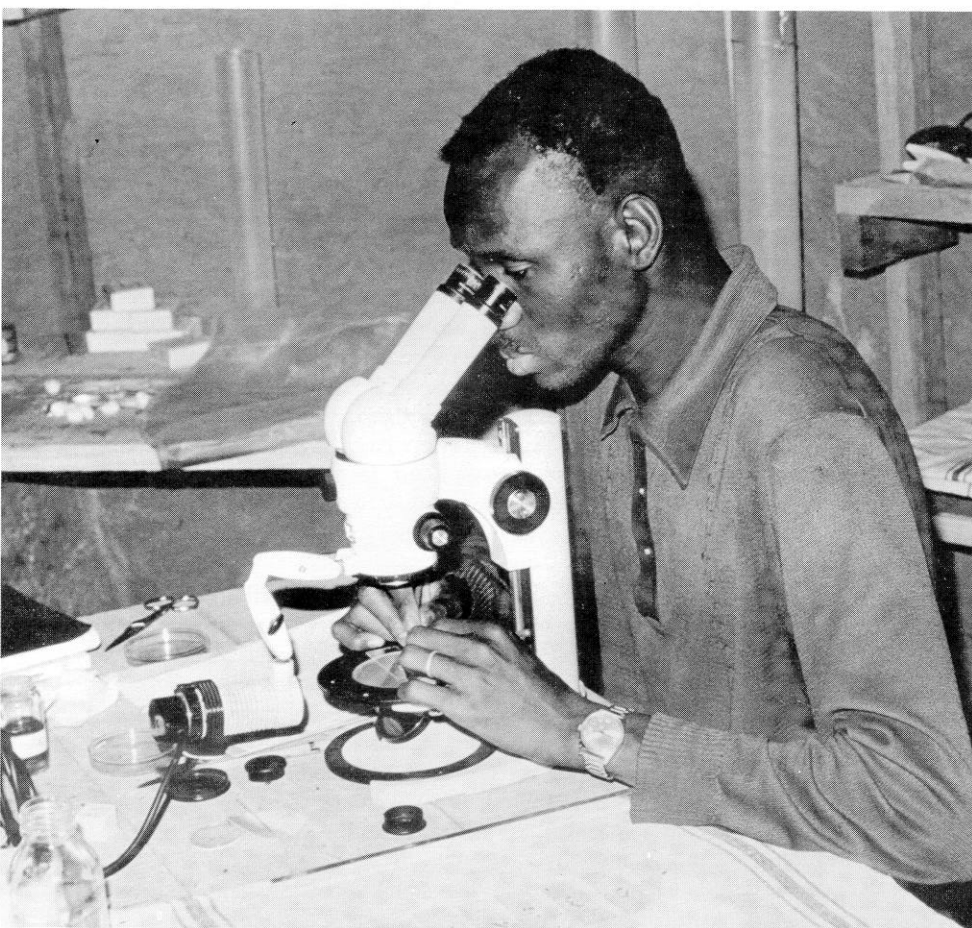


Above left: The highest incidence of river blindness is among men between 25 and 40 years of age (Photo: Marshall Laird). Above right: Entomologists Farida Lebtahi of Algeria, Jean-Marc Elouard of France, and Zerbo Doro of Upper Volta, study the breeding ground and habitat of the blackfly in Ivory Coast (Photo: M. O'Shaughnessy).

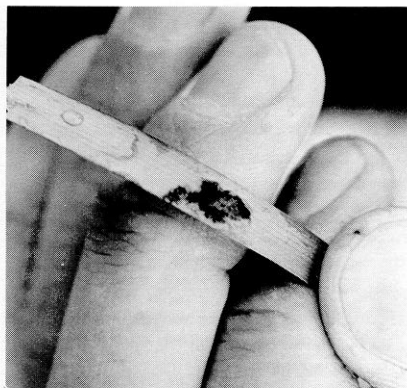


Zerbo Doro, entomologist from Upper Volta, dissects blackflies at the field research station in Ivory Coast (Photo: M. O'Shaughnessy).

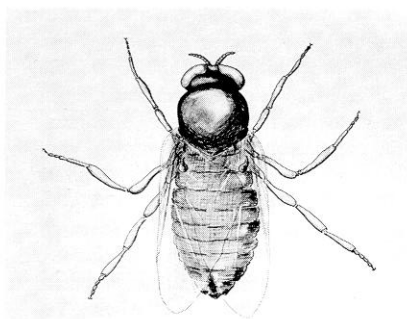
## Double a 'River B in West

The bite of the blackfly causes annoyance and discomfort to many Canadians every summer. However, the problems caused by a West African species of the blackfly known as *Simulium damnosum* are much more serious. It transmits a microscopic worm, *Onchocerca volvulus* to human beings. The spread of these parasites in the human body results in the disease onchocerciasis which, in its extreme form, causes blindness. In West Africa alone more than one million people suffer from the disease; 70,000 of them are totally blind.

The blackfly breeds in the fast-flowing streams of the region. Because the people fear onchocerciasis, or "river blindness," they have abandoned about 10 percent of the most fertile land in West Africa, located near rivers and streams. An estimated 2.5 million acres of potentially arable land in Upper Volta and in parts of Ivory Coast, Ghana, Togo, Dahomey, Senegal, Mali and Niger have been left uncultivated because of the menace of the blackfly.



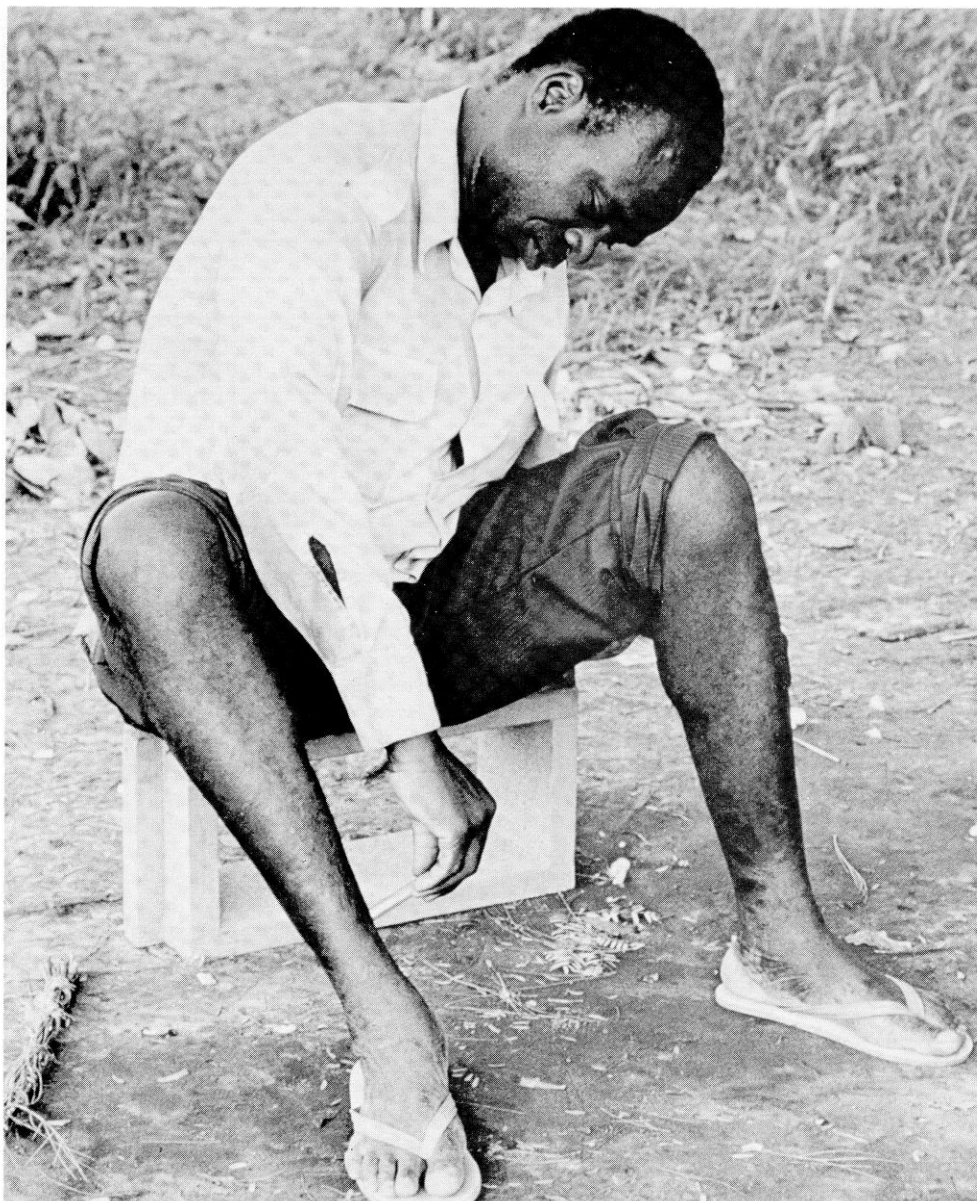
Above: Blackfly lays its eggs on stones and blades of grass. Below: Sketch of *Simulium Damnosum*.



## Attack on 'indness' Africa

There is a two-pronged drive to eliminate the disease, thus allowing increased food production in the river areas. One is a massive campaign, headed by the World Health Organization, to eradicate the blackfly vector through the use of pesticides over a period of 20 years. The second is a research program, financed by the IDRC, to find a biological means of controlling the blackfly by introducing parasitic worms known as **Mermithid nematodes**. Studies have shown that the introduction of mermithids leads to sterilization or death of significant percentages of blackflies.

Research into the life-cycle of the blackfly vector is being carried out in West Africa by the onchocerciasis unit of the Organisation de Coordination et de Coopération pour la Lutte Contre les Grandes Endémies (ocCGE), while at Memorial University of Newfoundland, staff of the Research Unit on Vector Pathology have been studying the breeding habits and physiology of the blackfly, as well as problems of mermithid cultivation under laboratory conditions.



Above: This man catches as many as 500 blackflies per day in glass tubes. They are sent to the laboratory for examination (Photo: M. O'Shaughnessy). Below: Researchers examine blackfly larvae found in a creek near the Memorial University of Newfoundland (Photo: L. Kryski).

