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Introductory Remarks

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PROGRESS IN THE INTERNATIONAL CONTROL OF ANOTHER MAJOR MIGRANT PEST: THE BLACKFLY VECTOR OF RIVER-BLINDNESS

Introductory remarks

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Onchocerca volvulus is a filarial worm, transmitted by blackflies (Diptera: Simulidae), which causes severe disease and blindness in Africa and parts of South America. The worms are threadlike; the male is usually only a few inches long, but the female grows up to 2 feet (*ca.* 0.61 m) in length. They lie paired, coiled and knotted together in nodules under the skin. The females produce millions of microscopic larvae that swim in the tissue spaces of the skin, waiting for a blackfly to pick them up and transfer them to a new host. In heavy infections they can reach a density of a hundred or more in every milligram of skin. They cause irritation, severe dermatitis and, in the eye, inflammation, fibrosis and blindness. In the past, blackflies have driven the people away from many fertile valleys of the Volta River basin. Their immature stages develop only in fast-flowing stretches of rivers, and so control methods rely on killing the larvae by aerial spraying of selected targets along river courses.

The following two papers deal, first, with the immensely successful Onchocerciasis Control Programme (OCP) of the World Health Organization (WHO), based on good science, good insecticides and a good anti-helminthic, and then with the threat to the Programme from reinvasions of blackflies from neighbouring territories into the OCP area. It was such reinvasions that led to the discovery that savanna species of the *Simulium damnosum* species complex, the principal vectors in West Africa, could migrate at least 500 km, assisted by the prevailing winds.