

TSETSE FLY

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Tsetse flies are only found in tropical Africa. They form the genus Glossina, a name derived from the Greek word "glossa", the tongue, and refers to the conspicuous proboscis which sticks out in front of the head. There are 22 species of tsetse, mostly with different habits and habitats. Basically, all species of tsetse are similar, being built on the same lines. When alive and at rest they are easily recognised: the abdomen is completely hidden by the wings, which fold one over the other like a pair of closed scissors, and project well beyond the tip of the abdomen. The length of a tsetse fly, measured without the proboscis, but including the wings, is between 6 and 16 mm. The overall colour is dark brown or yellowish brown, often with smoky wings. Some species have abdomens with black bands, interrupted down the median line, on a yellowish-orange background, but in general tsetse are inconspicuous insects which merge into their surroundings. The female mates about the third or fourth day of her free flying life, generally once ever and once inseminated remains thus for life. The female does not lay eggs in the accepted sense. Instead the embryo develops within the egg which is retained within the abdomen of the mother fly. On hatching, the larva still remains within the abdomen of the mother, drawing nourishment from two "milk" glands. When it is virtually fully developed, the mother, in effect, gives birth to the larva, usually in a dark place where the soil is friable. The larva burrows into the soil where it pupates. The puparium, which is brownish black to black in colour and varies between 5 to 8 mm in length, has two characteristic lobes on the one end. Depending on the average temperature pertaining at the time, the pupal period can vary from as little as three weeks to as long as thirteen weeks. The tsetse feeds solely on mammalian, reptilian or avian blood and is always harmless when it hatches from the pupa, but if it feeds on a host infected with a unicellular blood parasite called a trypanosome it may itself become infected and can then transmit the organisms to man or his domestic animals. Two species of trypanosome cause human trypanosomiasis or "sleeping sickness".

Three other species of trypanosome are responsible for a usually fatal disease in cattle, horses, sheep, goats and dogs often called nagana. A fourth species causes a fulminating disease in pigs. It is noteworthy that Buxton in his book "The Natural History of Tsetse Flies" stated as follows : "It would probably be correct to say that all cases of human sleeping sickness and a large proportion of cases of nagana were transmitted by the bite of tsetse flies (Glossina). It seems, then, reasonable to attribute a considerable share of the lack of development of Africa to infection of man or animals by these insects." In Rhodesia a total area of 67 629 km² (26 112 square miles) is infested or affected by tsetse flies, the main species being Glossina morsitans and G.pallidipes. Two other species occur, namely G.austeni and G.brevipalpis, but these are restricted to the Chipinga region of the international border and are of little economic importance.

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(TSETSE AND TRYPANOSOMIASIS CONTROL)