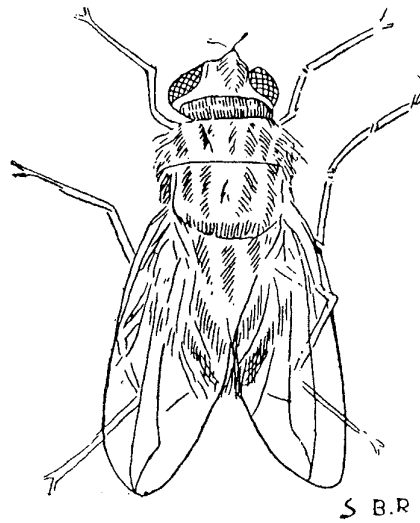


OUR PARASITES

The House or Typhoid-Fly

(Musca Domestica)

FLIES may be roughly classified as stinging and non-stinging flies, and among the latter is the common house-fly, also known as the typhoid-fly, because of the part it plays in disseminating this disease.



The life cycle of the fly includes the egg, the larva and the pupa. About 120 eggs are laid at one time in a single batch, and under favourable conditions four or more batches may be laid. The egg is pearly white and cylindrically oval. It is deposited by means of a small rod, projecting from the under surface of a female fly, deep in a dung heap or any other suitable site. The egg hatches out in eight to 24 hours, a legless larva emerging from it.

The larva grows to a length of about half an inch. It is white, smooth and cylindrical, tapering at the head and showing an enlargement at the tail. The larva makes its way by contracting and expanding its body. Emerging in this way from its home of manure, it seeks some dry spot where it changes to a mahogany brown and develops its pupa-case in which it ensconces itself. Bursting forth from this chrysalis in three or four days, the parasite is found in the interval to have changed into a fly, which in a week or ten days is sexually mature. The whole life cycle from egg to mature fly may be accomplished in nine or ten days.

The mature house-fly is yellow or dark red. The male is about six mm. long and the female seven mm. While the eyes of the male are close together, those of the female are widely separated. The body, including the legs, is covered with hairs, and each leg is provided with two claws, and a pair of pads covered with closely set secreting hairs, which enable the fly to walk even on highly-polished surfaces, upside-down, without losing its hold. These sticky hairs naturally hold germs as well as highly-polished surfaces, and are admirably fitted for carrying infection from one point to another.

The feeding habits of the fly may be disgusting but they are also most interesting. It is anatomically incapable of eating solid material, and when it settles on a lump of sugar, it proceeds to dissolve it by depositing saliva on it. The sugary solution is now sucked up through its proboscis and is frequently regurgitated in a single drop which is again sucked up,—horrible table manners. The fly now retires to a quiet spot to clean its head and proboscis, to digest and to vomit and suck up again its half-digested food, which, full perhaps of infecting germs, is left on this spot for some other fly to carry on, if the first fly is disturbed. When it is realized that flies may travel a distance of fifty to one hundred miles, if the wind is favourable, the importance of the part it plays in carrying infection becomes self-evident.

During the Spanish-American and South African wars, when typhoid played havoc among the troops, the part played by flies was carefully studied and their guilt brought home to them. First settling in latrines and soiling themselves with typhoid bacilli, they flew to such food supplies as jam and milk, infecting them heavily. Other diseases spread by the house-fly are cholera, anthrax, leprosy, bubonic plague, erysipelas, infantile diarrhoea, diphtheria, dysentery, tuberculosis, and a host of other infectious diseases. All this mischief is made without a sting: the fly simply carries germs from one place to another and leaves them to fend for themselves.

The most effective way of combating flies is to prevent their breeding or to destroy their eggs in their breeding grounds, such as heaps of manure. There are many ways of doing this. Manure may be sprinkled with crude oil emulsion, burned or buried. In towns, the displacement of the horse by the motor car, of the stable by the garage, has done much to reduce the fly plague, but much has still to be done to suppress it. Protecting human food supplies also means robbing flies of their breeding grounds and for this reason meat, vegetables and other food offered for sale should always be kept under some fly-proof cover.—*(Communicated by the Secretariat of the League of Red Cross Societies, 2, Avenue Velasquez, Paris VIII.)*

A law guides conduct by something outside a man, the Spirit directs from within; although lives are controlled by circumstances, circumstances are not identical with the Will of God; men realising the grandeur of human life rise above them.

"Conscience I will place within them as a guide" leading men on from what they know to what they ought to know. Without God, wild passions without solacement, wild faculties without employment, vex and agitate the soul.

High instincts are too often repressed by cowardice or indolence; to choose the higher way is hard but in the interests of Christ's kingdom it is worth while.

"Unless virtue guide us our choice must be wrong."—*W. Penn*