

HOW DO PARASITES FIND THEIR HOSTS?

Summary

In the host-parasite system, finding of the host is the task of a parasite. There are various adaptations in the parasite life cycle leading to satisfactory results. Most important is a huge reproduction of progeny, since only a low percentage of eggs or larvae can infect the host in, both, active or passive ways of infection. There are the following ways of transmission by parasites: active penetration into the host which is characteristic of the larvae, transmission by contact, by consumption, and by direct transmission. The necessary condition for the parasite and host to meet is their presence in the same place at the same time. Very often some modification of the life cycle is also needed and it may either shorten or lengthen it. A shortened life cycle may result from elimination of intermediate or final

host(s), from reduction of development stages, or by reduction of the free-living stage. On the contrary, a longer life cycle may include supplementary paratenic hosts and, rarely, an additional developing stage — mesocercaria. Most important and interesting are possibilities to manipulate host behaviour by a parasite (after Dawkins the extended phenotype of parasite). Parasites influence their hosts so as to make feeding by the next host easier. They do this by directing the host directly into the proximity of the next host, and/or by changing the host's colour or behaviour to make them more visible to the next host. All of these modifications have been discussed and illustrated by examples and by figures.