

WHAT IS "BLACKSPOT DISEASE" OF TROUT?

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"Black spot disease" is seen in trout from certain localities in Nova Scotia. The small black marks in the skin at times can be so heavy the fish looks like it has been covered with crushed pepper, ready for the pan. The spots are a developing stage (metacercaria) of a parasite (*Apophallus* sp.) that lives as an adult in the intestine of fish eating birds. Adult parasites lay eggs that leave the bird with feces that enter a lake or stream. The eggs hatch and a small free swimming larva (miracidium) enters a snail, where it undergoes asexual reproduction to produce an infective stage (cercaria) which leaves the snail in search of a trout. If successful the cercaria burrows into the trout skin to form the metacercarial resting stage, which when covered by host pigment cells, forms the so-called "black spot". When fish eating birds, and possible fish eating mammals, eat an infected trout the parasites emerge in the intestine and mature to lay eggs.

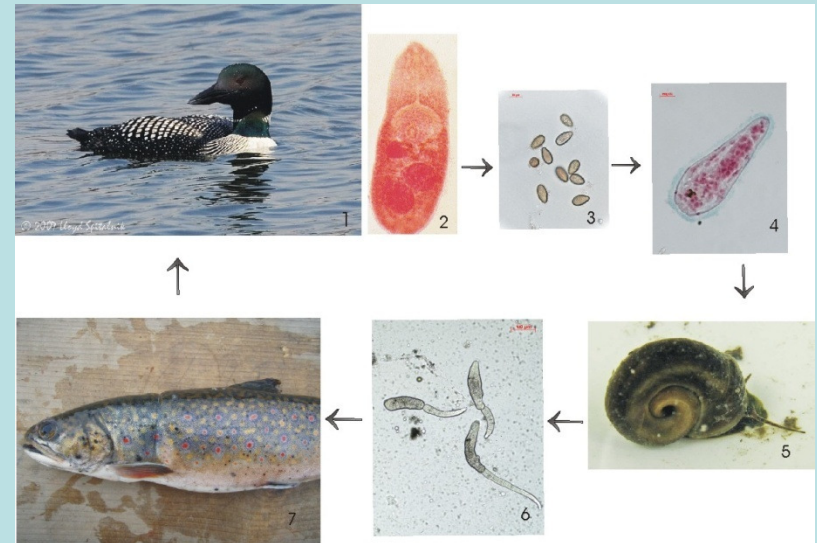


Important facts:

1) Although "black spot" is referred to as a parasitic disease, it does not influence the overall health of the fish and, **it is not harmful to humans if consumed.**

2) The presence of these parasites in a lake means that the pH is likely near neutral, for snails do not do well in acidic waters, and that there is a healthy presence of fish eating birds and mammals sharing the aquatic habitat with the snails and trout.

3) In sea-run trout the black spot is a different species of parasite (*Cryptocotyle*) than what is found in freshwater lakes.



1. Definitive host: fish eating bird 2. Mature parasite: reproduces in gut of bird 3. Eggs are shed into water-body with feces 4. Free-swimming miracidium seeks snail (intermediate host) 5. Snail host containing developmental stages of parasite 6. Free-swimming cercaria released from snail and swims to find trout (intermediate host) 7. Metacercaria in skin of trout that is eaten by bird (definitive host) to complete the life cycle.

Questionnaire: Have you caught trout infected with "black spot"? *If so, what is the name and locality of the lake or river?* Do you know of a lake with no indication of "black spot"? Please return to John MacMillan, NSDFA in Pictou, or David Cone, Department of Biology, Saint Mary's University).