

SESSIONAL PAPER No. 38a

fish a large number of colonies were isolated. These colonies were lettered and numbered, and besides those here described a large number of other colonies were isolated, which were compared and found similar to those mentioned by letter and number.

FISH No. 1. Appearance normal, with the exception of a few patches of diseased skin around the head. On opening, the organs appeared normal. Plates were made from milt, liver, swimming bladder, kidney, heart's blood. In all cases the material was transferred to sterile petri dishes and beef peptone salt water agar poured over. After the plates had set they were kept at 20°C. Results:—

Milt.—About 60 colonies.

Liver.—About 100 colonies.

Swimming bladder.—Contained a quantity of liquid. Very large number of colonies, too numerous to count.

Heart's blood.—About 300 colonies to the oese. All these colonies were very similar.

Kidneys.—About 90 colonies.

Four species were isolated from this fish, marked A1, A2, A3, A4. Flesh near diseased skin normal in appearance.

FISH No. 2.—External appearance normal except some bruises with traces of the fungus development near tail and head. On opening, the liver was rather pale in colour, somewhat friable, intestines empty, caeca empty. Right ovary eggs pink in colour; left ovary eggs much darker in colour, almost liver-coloured. Flesh normal and good colour. Same technique. One oese from each of the parts mentioned.

Ovary.—Pink eggs. From one crushed egg 300 or 400 colonies developed.

A larger number from the one crushed egg from the dark red left ovary.

Liver.—20 colonies.

Heart's blood.—60 colonies per oese, all practically identical.

Isolations B1, B2, B3, B4.

FISH No. 3.—Exterior appearance normal with the exception of a few small areas discoloured visible in the skin. Flesh normal in appearance. Interior organs apparently normal. Smears from the various organs showed bacterin.

Heart's blood.—About 250 colonies to the oese, all similar.

Eggs.—Innumerable colonies. Two species.

Liver.—20—30 colonies per oese.

Kidneys.—80—100 colonies.

Two isolations—C1, C2.

FISH No. 4.—A large fish; much gelatinous slime around the tail. Some areas of skin affected with the fungus. Flesh beneath appeared healthy. Intestines slightly congested, empty. Liver dark in colour. Eggs salmon pink in colour, apparently normal. Swimming bladder empty. Smears from the heart's blood liver and kidney showed a number of organisms:—

Heart's blood.—30—40 colonies, all similar.

Liver.—10—12, all similar.

Kidneys.—20 colonies, all similar.

Eggs.—About 150 per egg. This is an estimate, as a large growth had occurred in the vicinity of the crushed part of the egg.

One isolation, D1.