By the methods used, evidence of a carrier-shedder stage was not elicited in any of the eight inoculated frogs. The homologous isolate was initially isolated from frogs collected from their natural environment, and so a transient infection with a short term carrier-shedder state may be of some significance since frogs are a food source for some animals.

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Permanent Mounting Method for Fluorescent Antibody Preparations

Creech and Jones[1] showed that various proteins can be labelled with a fluorescent dye without material effect on their biological or immunological properties. Through this work it became possible to localize antigens and, by the use of the sandwich technique[2], to localize antibodies.

Today the wide range of commercially available fluorescent labelled antibodies makes the fluorescent antibody techniques applicable to routine diagnostic tests for organisms, as well as for the more specialized localization of antibodies and complement fractions. One of the disadvantages of the technique, however, is that the buffered glycerine mounting material which is routinely used gives only a temporary preparation. The intensity of the staining in such slides is fairly rapidly lost. Even on the day after preparation it is less brilliant and there is usually some loss in the staining pattern.

Table 1. TECHNIQUE FOR 'UNIMOUNT' FLUORESCENT ANTIBODY PREPARATION

(1) Treat slides (and controls) with fluorescent labelled sera in the usual manner[4].
(2) Wash four times in phosphate buffered saline *p*H 7·1.
(3) Allow preparations to dry in air at room temperature, after draining excess onto filter paper. *Do not treat with alcohol.*
(4) Place slide in xylene. If slide does not clear immediately, blot lightly with fine fluffless filter paper and allow to dry. Replace in xylene, when preparation should become quite clear and transparent, with no trace of a milk-like haze. If the preparation is still not clear, this treatment should be repeated.
(5) Remove slide from xylene, wipe off excess xylene from back of slide and around preparation, and place a drop of 'Unimount' on slide and apply coverslip. Care should be taken to avoid trapping air bubbles.
(6) Slides can be examined under the fluorescence microscope immediately, and when the mounting material has set (overnight) they can be stored in an upright position.

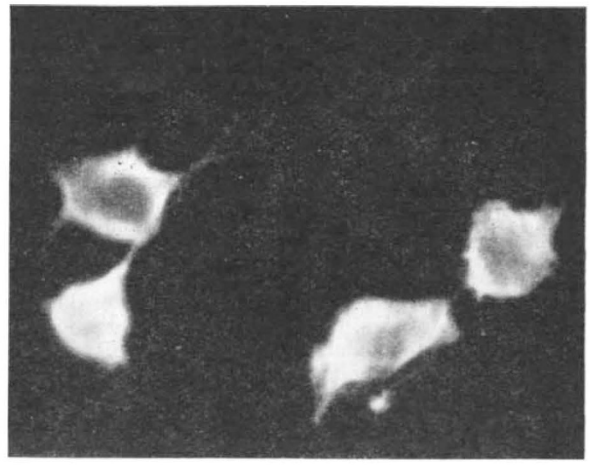

Fig. 1. Fibroblasts exposed to cytotoxic guinea-pig antiserum for 2 min and then treated with fluorescent anti-guinea-pig gamma globulin. This preparation was stained 2 months before the photograph was taken. (×*c.* 550.)

During the course of fluorescent investigations on the cytopathic effect of humoral antibodies of *L*-strain fibroblasts[3], Biological Research Inc., Bridgeton, Missouri, kindly made available to me a new non-fluorescent mounting material, which they have named 'Unimount'. I have found that fluorescent antibody preparations mounted in this medium retained their brilliance and intensity of staining and after a period of two months have not lost any of their original staining characteristics (see Fig. 1). The slides have been stored at room temperature in light-proof slide boxes, of the standard type, and have been examined daily over this period. Another advantage of using this mounting material is that it has a higher refractive index (1·4883 at 20° C) than the aqueous type mounting material (1·4312 at 20° C) and gives better definition and resolution.

The method used, which is essentially very simple, is given in Table 1.

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BIOLOGY

Transatlantic Movement of a Tagged Spurdogfish

Although spurdogfish (*Squalus acanthias*) normally make long-distance migrations these usually follow well defined seasonal patterns[1], but on September 12, 1966, a spurdogfish which had been tagged off Cape Wrath (58° 31′ N., 05° 28′ W.) on December 10, 1962, was recaptured in Hermitage Bay, southern Newfoundland. This migration was completely abnormal. At release the fish was a mature male, 78 cm total length; its length at recapture was reported as about 3·5 ft. (107 cm), but this is greater than the length to which male spurdogfish grow[2]. The tag used was the Petersen type, consisting of a pair of plastic disks, fastened one each side of the first dorsal fin with a stainless steel wire.

It is clearly impossible to state the route which this fish took, but it would have belonged to the Scottish Nor-