whose nets were secured on soft banks of mud, used a type of sledge or 'mud-horse', which they pushed in front of them. The sledge served the double purpose of preventing them from sinking deeply into the mud and of carrying back the catch. Barnett (personal communication) used mud shoes of his own design to aid movement.

Ecological investigations on littoral muds often necessitate travelling for distances of several hundred yards, and then remaining in one position for periods of several minutes while samples are taken. The problem of performing these tasks has been overcome by designing mud skis.

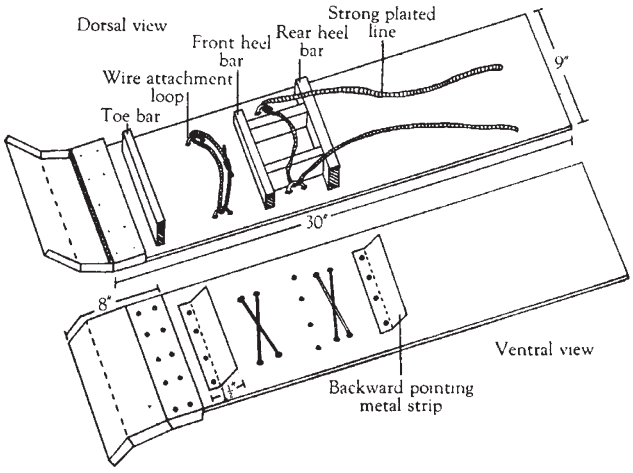

Fig. 1. Diagrammatic sketch of the mud skis

The main body of each ski is of $\frac{1}{4}$-in. thick 3-ply wood, 30 in. long and 9 in. wide, to which are attached a toe, front heel, and a rear heel bar (Fig. 1). These wooden bars prevent fore and aft movement of the foot relative to the ski, bars on either side of the heel eliminating sideways movement. The upturned forward end of the ski is fashioned from 18 gauge galvanized iron, as are the backward pointing strips on the ventral surface. For extra strength the galvanized attachments and wooden bars are fixed to the 3-ply board with $\frac{3}{4}$ in. brass screws. The ski is fastened to the foot in two places by means of strong plaited line threaded through attachment loops made from $\frac{1}{8}$-in. diameter galvanized wire.

Forward movement is effected by using one ski as a pivot, sliding the other ski forward relative to it, then using this ski as a pivot. The backwardly directed metal strips on the underside of the pivot ski prevent slipping.

This method of progression allows a sledge laden with sampling equipment to be drawn along by hand.

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[1] Yonge, C. M., *The Sea Shore* (Collins, London, 1949).

Impurities in Commercially Prepared Tritiated Folic Acid

Radioisotopically labelled compounds are being used with increasing frequency in both basic science and clinical investigation. Most laboratories are dependent on commercial sources for these products, and although the specifications attesting to the purity of a compound are usually accurate, exceptions do occur.

We have recently had occasion to use commercially available tritiated folic acid specified by the manufacturer to be 100 per cent pure by dilution analysis and chromatography. As a check on the purity a sample of the tritiated folic acid was subjected to paper chromatography in subdued light, using 0·2 M phosphate buffer *p*H 7·0. Fig. 1 is a photograph taken under ultra-violet illumination of the chromatograms of the tritiated folic acid as well as unpurified and purified stable folic acid. Strip *A* is the tritiated folic acid with accompanying radioscanogram. Radioactivity is clearly evident at several positions corresponding to two slow-moving fluorescent areas, a middle absorbent area representing folic acid, a second faster-moving fluorescent area, and a less-clearly visible absorbent spot near the end of the strip. Strip *B* is unpurified grade *C* folic acid. Similar slow-moving fluorescent areas are evident, but the fluorescence just ahead of the folic acid absorbent spot is moving slower than that seen in the tritiated folic acid strip. However, this impurity on repeat chromatography sometimes spreads from the folate absorbent area, and, therefore, probably represents the same impurity. Strip *C* is the same commercial folic acid purified in our laboratory by the method of Sakami and Knowles[1]. Practically all but a slight trace of the faster-moving fluorescent impurity has been removed. We did not analyse these impurities, but from the observations of Belcher *et al.*[2] it would appear that the faster-moving fluorescent area seen in strip *A* represents free tritium and/or para-aminobenzylglutamates. The slower-moving fluorescent areas are probably pteridine fractions. The fluorescent areas at the end of the strips are due to accumulation of phosphate salts at the solvent front.

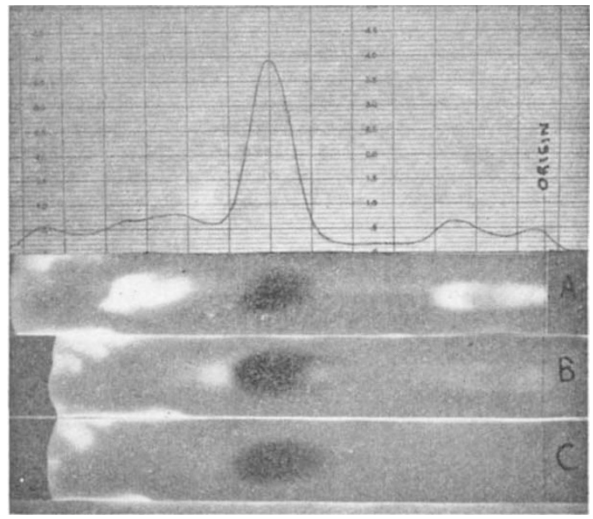

Fig. 1

Planimetric analysis of the tritiated folic acid radioscanogram revealed that only 50 per cent of the radioactivity corresponded to the folic acid absorbent area. The slow- and fast-fluorescent areas had approximately 15 and 35 per cent of the radioactivity, respectively.

The pure folate absorbent area was easily eluted from the paper with 0·2 M phosphate buffer, *p*H 7, and, when rechromatographed under similar conditions, moved as a single radioactive peak corresponding in mobility to pure folic acid.

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