marmorata Quoy and Gaimard, from the Buffalo River, Eastern Cape (27° 30′ E., 32° 57′ S.), but as this was the only one from the continent of Africa its validity has been queried. However, among the eels in this Department and of the Kaffrarian Museum, Kingwilliamstown, we have found six, all females, with pleated gonads full of ova, which are unquestionably *Anguilla marmorata* Quoy and Gaimard. Three of these, 85–135 cm. in length, are from the Keiskama River (27° 13′ E., 33° 03′ S.) (near the Buffalo), and the remainder, 73–108 cm. in length, from the confluence of the Sabi and Lundi Rivers in Southern Rhodesia (32° 25′ E., 21° 10′ S.). In both cases the habitats are mature rivers below the 1,000-ft. contour.

At night, during February and March 1957, upstream migrations of thousands of young eels, at all sizes from 10 to 22 cm., were observed in the Buffalo (27° 30′ E., 32° 57′ S.) and the Kariega Rivers (26° 30′ E., 33° 23′ S.). In samplings taken at this time from the Laing Dam wall on the Buffalo River (27° 30′ E., 32° 57′ S.) three species are present, about 85 per cent being *Anguilla mossambica* Peters. Two specimens, 21·5 and 14·5 cm. in length, are *Anguilla bicolor bicolor* McClelland and the remainder *Anguilla marmorata*. Those from the Kariega River were all *Anguilla mossambica*. A fourth species, *Anguilla nebulosa labiata* Peters, the biology of which has been studied and described in much detail by Dr. Winifred Frost[2], has not yet been found in these southerly rivers.

It is unfortunate that the discovery of *Anguilla marmorata*, in the rivers mentioned above, was made too late to be included in the interesting communication by Dr. W. E. Frost in *Nature* of March 16[3].

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[1] Revision of the Genus *Anguilla* Shaw, *Dana* Report No. 16, 87 (1939).
[2] Frost, W. E., Col. Off. Fish. Pub. No. 6, 1 (1955); *J. Cape Piscatorial Soc.*, No. 38 (1957).
[3] Frost, W. E., *Nature*, **179**, 594 (1957).

Dirt Removal from Cotton

In the course of investigations into detergency using radioactive isotopes, some interesting observations have been made. The chopped fibre technique[1] was used, and the cotton fibre was soiled as described previously[2], but with a proportion of the stearic acid replaced by stearic acid-1-^{14}C. The rate of removal of stearic acid from the fibre after washing with different detergent solutions for various times was measured by the residual activity of the fibre compared with the initial activity of the unwashed fibre. The fibre was made into smooth pads and activities were determined by an end-window counter.

It was found that the relative efficiencies of the detergents as estimated by the removal of the stearic acid and by that of the pigment (graphite) component of the soiling mixture determined by reflectance measurements showed marked similarities, as illustrated in Fig. 1. In addition, although excess of a strong alkali, sodium metasilicate, was present in all detergent solutions, the removal of the stearic acid depended partly upon the detergent used.

This work is being continued employing different fibres and with each type of fatty component of the soiling mixture labelled in turn with carbon-14.

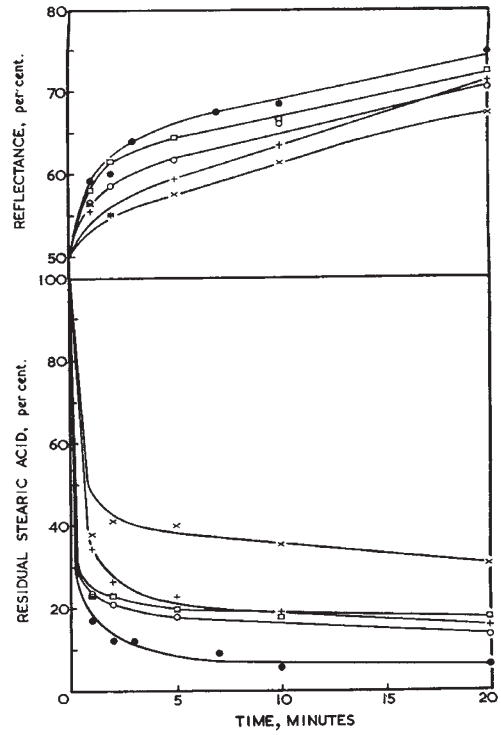

Fig. 1. Removal of radioactive stearic acid and of graphite from cotton. ●+○□, 0·1 per cent of detergents plus 0·15 per cent of sodium metasilicate; ×, 0·15 per cent of sodium metasilicate only

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[2] Wagg, R. E., *J. Textile Inst.*, **43**, T515 (1952).

Organo-Clay Complexes

It has been shown by X-ray analysis that certain organic compounds are taken up between the basal surfaces of montmorillonite and halloysite to form interlamellar complexes. The space occupied by the organic molecules is determined by subtracting the van der Waals thickness of individual clay sheets from the observed (001) spacing, and is normally less than that calculated by assuming that the molecules lie as flat as possible and also make van der Waals contact with the surface atoms of the clay. The apparent reduction in thickness has been ascribed to CH . . . O bonds[1–3] between the oxygen atoms of the clay surface, which have an induced negative charge arising from the isomorphous replacement charge, and the organic molecules. Polyvinyl alcohol, the crysta structure of which has been determined, appears to form a two-layer complex with montmorillonite in which there is van der Waals contact between the —CH_2 groups and the surface oxygen atoms, and the plane of the carbon chains is perpendicular to the (001)