REVIEWS

MONOZYGOTIC TWINS. James Shields. London: Oxford University Press. 1962. Pp. 264+x. 50s.

This book sets out the result of investigating eighty-eight pairs of monozygotic twins, forty-four of them brought up in different homes and forty-four in the same home, to which are added thirty-two pairs of like-sexed dizygotic twins, rather less systematically investigated. It is perhaps a sign of the times that forty-one pairs of the identical twins brought up apart were obtained as a result of an appeal made in a programme on B.B.C. television.

The twins were examined in respect of physical characters, notably height and weight, intelligence and a number of personal characteristics, the emphasis always being placed on the endeavour to discover differences that could be attributed to the differences in environment of the pairs that had been separated. In general the monozygotic twins reared apart were less alike than those reared together, but the differences traceable to early environment were surprisingly small. The effect of difference in early environment is almost trivial by comparison with the effect of difference in genetic constitution.

Dr Shields has carried out a painstaking study of a unique body of cases. He has made a valuable contribution to the literature on human twins and one that deserves to be studied with care—especially by those who doubt the significance of genetic differences in the determination of human diversity.

KENNETH MATHER.

THE EVOLUTION OF THE BANANAS. N. W. Simmonds. London: Longmans. 1962. Pp. 170. 42s.

The origins of cultivated plants were represented by Vavilov as demonstrating two theories: a botanical theory, that of geographical centres, together with a genetical theory which we may derive from Darwin's principle of unconscious selection as applied to cultivation. These were unified theories applied to all staple crops. How have they fared?

In brief, we may say that, on the one hand, the notion of centres has ceased to have much unifying value. The notion of unconscious selection on the other hand we may now apply to breeding systems as well as to cultivation practices and it remains universal in its application. It is indeed becoming one of the contributions, very diverse contributions, of genetics to the understanding of history. But a third kind of development arises from the detailed analysis of individual crops. It is here that the history of the banana plays such an illuminating part, illuminating both for genetics and for history.

The special properties of the banana which make for its special value as a key to evolutionary change are two: first, if it is to be used for food, it must produce no seed; secondly it can be propagated without seed and thus has been widely distributed by its cultivators in the form of fixed and recognisable vegetative clones always parthenocarpic, often triploid.