correlation was found between the number of variant plants and crop-weight of plots containing differing numbers of them. From the point of view of certification schemes, however, it is very desirable to eliminate the variant from stocks used for raising runners. Stocks will be maintained for investigation. Evidence so far suggests that the variant is confined to certain stocks sent from the Research Station in 1947 and 1948.

A note by Darrow[1] on a change in length of fruit-stalk, possibly due to mutation, is the only previous report of mutation in the strawberry that has come to my notice.

I wish to thank Mr. Spickernell for first reporting the variant, and Mr. M. B. Crane, Miss D. Wilson and others for further information.

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[1] Darrow, G. M., *J. Heredity*, **17**, 404 (1926).

Soil and Vegetation in British Somaliland

The welcome publication of the first volume of Major Glover's work[1] directs attention to certain points regarding the soil and pastures in British Somaliland, which have been investigated for some years past, though little has been published. Opinion is divided on the extent and importance of the soil erosion, and the whole problem has recently been reviewed in detail by Brigadier (now Sir) Gerald Fisher[2], lately military governor.

Two factors, however, seem to have been generally overlooked.

First, the geological aspect. Probably in Upper Eocene times rift faulting in the Gulf of Aden trend (east-north-east) gave rise to the great northern Somaliland scarp, which now rises to heights of some 1,500–2,400 metres, and forms the backbone of the Somaliland Protectorate. Since then, for a matter of perhaps forty million years, all but a slight coastal strip has been continuously above the sea, and at roughly the same altitude as now. In Pleistocene times the country was strongly affected by the East African Pluvial periods, when great erosion took place, and later deposition of thick beds of red alluvium in many of the valleys.

The state of the countryside at the present day is fundamentally a legacy from the Pleistocene period. Lack or sparseness of soil-cover over much of the highlands may be ascribed to the intense Pleistocene denudation, and not to present-day erosion. It may even be that soil and vegetation in the highlands have been for the past five thousand years or more, and still are, slowly recovering under difficult conditions rather than deteriorating.

Secondly, an interesting phenomenon, which seems hitherto largely to have escaped notice, appears from a study of many air photographs of the country. A number of these, covering large areas of semi-desert plains of the Sawl Haud in the east of the Protectorate, and parts of the Haud in the south, show rhythmic patterns of the vegetation, which is concentrated in the form of tiers of arcs of mixed trees, shrubs, plants and grasses. These photograph black against a light background of bare desert. The patterns proved very difficult to recognize in the field, so that air photographs are essential for their study.

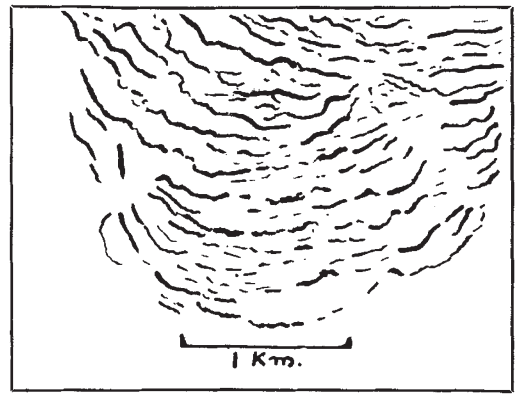

Diagram traced from air photo showing vegetation arcs at Gudubyero, Sawl Haud, British Somaliland, lat. 9° 44′ N., long. 48° 41′ E.

The vegetation arcs (see diagram) appear to be formed by the relatively rare rain storms, the water from which flows over this country of very low relief as a sheet, and not in incised water channels. It seems that accumulated organic debris, including seeds and also animal excreta (which is found in surprising abundance), are thus partially floated and carried along until for some reason not yet clear the load is deposited rhythmically in convex strand lines. Some of the seeds germinate and a vegetation arc is formed. This process appears to be repeated intermittently, and the arcs become firmly established features, practically all the vegetation of the semi-desert being concentrated in them. They include *Acacia* trees probably half a century old. The intervening ground, three or four times the width of the vegetation arcs, is kept almost completely bare.

As regards the scale, a single rhythm of vegetation arc and intervening desert averages about 160 metres, but may range from 70 m. to nearly 300 m.; the length of an individual arc is very variable, and may reach 2 km. or more.

The vegetation arcs are of practical value to the map-maker since they are invariably oriented with their convex sides directly up the slight slope, for which a preliminary value of *c.* 1 in 400 has been obtained. In fact, in some places they seem to form a rough approximation to naturally marked 'contours', with a vertical interval of the order of half a metre.

I suggest that this remarkable type of country, covered by tiers of these stable vegetation arcs, cannot at the present time be suffering appreciable soil erosion. Yet such country has been claimed as showing "severe erosion"; and Jacks and Whyte[3] have published an air photograph of it with the erroneous title "Wind erosion".

It is hoped to publish elsewhere a more detailed account of these and other vegetation patterns in the semi-deserts of Somaliland that are shown by the air photographs.

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[1] Glover, P. E., "A Provisional Check List of British and Italian Somaliland Trees, Shrubs and Herbs" (London: Crown Agents for the Colonies, 1947. £4).

[2] "The Pastures of British Somaliland" (Aden: Cowasjee Dinshaw Press, 1947).

[3] Jacks, G. V., and Whyte, R. O., "The Rape of the Earth: a World Survey of Soil Erosion" (London, 5th Imp., 1947); see Fig. 14.