growth area of newly formed epithelium in human skin cultures activated by adult tissue extract bore a ratio of 16 : 1 to that of non-activated cultures (average of fourteen experiments). The growth-accelerating effect of extract of adult fowl heart on human epithelium is thus very pronounced.

In view of the experiments reported above, the following consideration seems justified. Attempts have been made by various workers[3] to assist the process of wound healing by means of cell growth-promoting tissue extracts. The results of these experiments have been consistently favourable. The process of wound healing is accelerated, and non-healing wounds can be induced to heal under the influence of extracts which activate cell growth. Despite the favourable results of the clinical experiments, the use of growth-promoting tissue extracts in wound treatment did not find general application. In all clinical trials carried out, the source of growth-promoting substances was embryo extract, which is not particularly easy to obtain and quickly loses its growth-promoting power. This circumstance rendered this method completely impracticable. The fact that extracts of heterologous adult tissue are capable of strongly stimulating the proliferation of human cells suggests a new and simple solution of the problem. Extracts of adult tissues combine a twofold advantage : they are highly potent and they are easily available.

To sum up. Extracts of heterologous adult tissues stimulate cell growth *in vitro* to a high degree. Their efficacy in wound healing is to be expected, but has to be proved by therapeutic experiments. Treatment of wounds by adult tissue extracts is being carried out in the Surgical Department of the Hadassah-University Hospital, Jerusalem. A paper reporting the results of clinical trials is to be published shortly.

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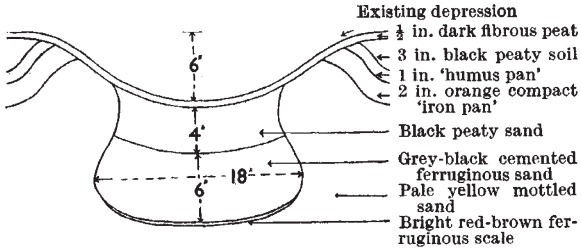
Human Activities and Soil Characteristics

THERE are probably few lowland areas in Great Britain where the development and characteristics of soils have not been materially altered by the impact of human activities ; it is, nevertheless, often assumed that portions of the New Forest have been little influenced by man's interference. Investigation would suggest, however, that such is far from being the case, and that comparatively unobtrusive factors have exerted effects which often obscure and complicate the fundamental soil-forming processes.

Recently, as part of an effort to improve the quality of the forest grazings, a fairly level 'moor' at Pilley near Lymington was ploughed ; the existing flora consisted mainly of *Erica tetralix* and *Calluna vulgaris* (dom.), with *Molinia cœrulea*, *Agrostis setacea*, *Ulex minor*, Carex and Lichen, in an open community. Over a considerable area, the occurrence was observed of parallel orange-coloured bands, extending in varying directions on the bottoms of the furrows, at about 4 in. below the surface. In a few instances these bands could be identified with the impressions of old cart tracks ; a typical soil profile is shown in the diagram.



According to local informants, marl was at one time carried across the moor from pits to farms lying beyond its margins. The marl carting apparently commenced about 1840, using, in the early days, oxen teams with broad-wheeled carts ; the practice was finally discontinued around 1890.

It would appear possible that the pressure of the wheels broke the continuity of the iron pan, which was forced downwards, below the rut, while the adjacent pan outside the rut was forced up and exposed at the surface. The depression was afterwards filled by washing in from the sides, and in many cases has practically disappeared. The exposed ferruginous material underwent a change in colour from orange to dull brown, and the whole became covered by a thin horizon of humous material, of recent origin.

Taken as a whole, the soil characteristics of this moor are now rather variable. Apart from the profile already described, at certain sites a typical podsolic bleached A_2 horizon is discernible ; at others, a few yards distant, the iron pan is overlain by a black peaty sand. The 2-in.-thick iron pan appears nowhere to lie more than 6–8 in. below the surface, while the superficial A° horizon of peat is only about ½ in. and the bleached sandy A_2 about 2 in. in depth.

It is difficult to believe that the present poorly developed eluvial horizons correspond with the strongly developed illuvial horizons now observable, and it is suggested that the original A° and A horizons may have been removed by the intermittent operations of peat cutting and heath burning, known to have been practised in the past.

In the opinion of the writer, the foregoing serves to illustrate the difficulty in interpreting the various factors which have affected soil-forming processes, even in an area which, at first sight, might be thought to have developed under the influence of purely natural agencies.

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