

St. Jerome and Vitamin A

THE following passage, taken from St. Jerome's "Life of St. Hilarion", which was written about A.D. 392, appears to be the earliest account of the etiology, symptoms and cure of severe vitamin A deficiency. "From his thirty-first to his thirty-fifth year he had for food six ounces of barley bread, and vegetables slightly cooked without oil. But finding that his eyes were growing dim, and that his whole body was shrivelled with an eruption and a sort of stony roughness (*impetigine et pumicea quadam scabredine*) he added oil to his former food, and up to the sixty-third year of his life followed this temperate course, tasting neither fruit nor pulse, nor anything whatsoever besides."

This combination of an eye-affection, night-blindness or perhaps xerophthalmia, with a severe hyperkeratosis precisely resembles the condition described by Frazier and Hu¹ as occurring in Chinese patients who had received a diet not unlike that of St. Hilarion, namely, a cereal other than wheat, white cabbage and salted vegetables. These patients were speedily cured by cod-liver oil or carotene; and it seems probable that a crude and unpurified olive oil, such as St. Hilarion would have permitted himself, would contain enough of the fairly high vitamin A content of the olive to relieve his symptoms and maintain good health. The evident accuracy of St. Jerome in this particular may induce further study of this interesting biography.

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¹ Frazier, C. N., and Hu, C. K., *Arch. Dermat. and Syph.*, **33**, 825 (1936).

West Cumberland and its Utilization

As one who has had contacts, through geology, with industry, mining and agriculture in Cumberland during a quarter of a century, may I be permitted to comment upon Dr. Stamp's article on "West Cumberland and its Utilization" in *Nature* of November 18.

The basic causes of the depression in West Cumberland during the 'thirties are only too fully recognized, and lack of transport facilities cannot be regarded as one of them. Indeed, as the raw materials for the iron and steel industry are found within the district, the transport from mine to furnace and furnace to factory is almost eliminated.

Although West Cumberland does not lie on the western main route from England to Scotland, it is misleading to describe it as lying at the end of a branch line from Carlisle. It is connected with the main railway route at three places, Carlisle, Penrith and Carnforth. Admittedly the south route needs improving. The urgent need here is for a railway and road, across the Duddon Estuary, so quartering the road and rail distance between Askam and Millom.

The intense depression in the heavy iron and steel industries in the 'thirties was national, but in West Cumberland its effects were felt not only in the rolling mills, the blast furnaces and the coke ovens, but also in the local iron-ore mines, limestone quarries and coal mines, which supplied the raw materials for the heavy industries. The presence of coal, hæmatite and limestone in the same area are natural advantages

enjoyed by West Cumberland, and to them we may add two more. Adequate water supplies are, or can be made, readily available. The district is served by ports, so that foreign hæmatite, when needed, comes into the district by the cheapest means of transport—transport by sea—and exports flow from the ports.

These natural advantages are beneficial during times of trade prosperity; but because the industries are so largely interrelated and interdependent, the whole district is especially susceptible to trade depressions. The need for new industries is self-evident.

Dr. Stamp's statement that under certain contingencies "the enormously important influx of wealth from holiday makers will cease" is difficult to understand. Alas, no such wealth has ever flowed into West Cumberland. West Cumberland should not be confused with the Lake District, from which it is quite distinct, both topographically and geologically. The present industrialization of the former district in no way affects the amenities of the latter, and the position would not be changed by bringing new industries into West Cumberland.

Whether the Lake District becomes a national park or not, the holiday resorts for this lovely district will continue to be largely centred on Keswick, Ambleside and Penrith, all far removed from the industrial West Cumberland. As regards the seaside villages on the West Cumbrian coast, these are primarily the holiday resorts of local people. Their prosperity will reflect the prosperity of the industrial area.

Everybody will agree that regional "planning is essentially the right allocation of land". In Cumberland the allocation would appear to be: land for industries in the industrial zone of West Cumberland, the minimum inroad by industry into the rich agricultural land surrounding Carlisle, and the reservation of the Lake District as a national park.

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I HAVE no quarrel with most that Dr. Trotter says, but his letter strikes just that note of false optimism which it was my concern to avoid. Apart from the steady deflexion of the hæmatite reserves, the heavy iron and steel industry is naturally well sited, but to say the "need for new industries is self-evident" is a long way from suggesting how they can be attracted. It is in this regard that a manufacturer seeking a location for, say, a textile factory, would look seriously at the time taken to reach an area off the main line by which his goods would be distributed. It is 1½ hours by rail to Whitehaven from Carlisle, 2¼-3 hours from Penrith and 2¾-3¼ hours from Carnforth. I was not, of course, confusing West Cumberland with the Lake District; but it is important to realize that the war-time extension of the industrial area has introduced an alien element in the once purely rural views from the high ground of the western Lakes. To say that the charming West Cumbrian coast from St. Bee's Head to Millom is primarily the resort of local people is to deny its immense potentialities as a natural seaside extension to the Lakes, which increased facilities of access and accommodation should render very popular and a consequent source of wealth to the area—but not if it is spoiled by sporadic industrialization.

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