

lying the Noppi Series. In a concluding section the relations of the succession in the Loos-Hamra region to that of Central Sweden are discussed. For this purpose much of the data are still to seek, and the author is ready to recognize the tenuous character of proposed correlations.

In this review lack of space forbids a discussion of the many interesting petrological problems raised by the author's petrographical studies. His account is enriched by one hundred and fourteen chemical analyses carried out on the more important rock types, and these have added material support to his conclusions in the field of petrogenesis.

The memoir is beautifully illustrated with a large number of photographs, a large coloured map, and numerous sections. With its publication the Loos-Hamra region is elevated to the status of a key area in the pre-Cambrian of Fennoscandia.

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THE COMPLEX QUESTION IN JAMAICA.

SIR,—Dr. Matley's criticism of my paper in the June number seems to call for a few lines in reply. I should have stated that the granodiorite junction certainly is a steeply thrust one in some places, and as I see it, the plutonic complex is a discordant bathylith taking on to some extent the character also of a bysmalith. Along the Wag Water near Lawrence Tavern it sends veins directly into the purple conglomerate, but at the junction with the Iron River lumps of coarse-grained granodiorite have been disengaged and mixed with crushed material. Hornblende schist or rock closely resembling it occurs among hornfels on the Rio Pedro and the hornfels nearby has been formed out of pebbly material, possibly Richmond beds, and the pebbles drawn out to form the streaks in the hornfels. This in the midst of an area of unshered granodiorite I can only explain by melting.

We are not dealing here with old deep-seated granite bosses with extensive aureoles, but with some unfamiliar Andean or Antillean more superficial effects about which there seems to be plenty yet to learn.

The section below the Lazaretto, p. 261, is as nearly as possible as I sketched and described it; there is no possibility of an unconformity here, the section is one and indivisible. I can only suggest that it is due to gases travelling ahead of an intrusion melting their way rapidly into the white limestone and then coming to a standstill. The eruption of Mount Pelée showed us something of what such gases can do.

I do not consider any exposure that I have seen in Jamaica to be a basal complex or fundamental floor; the thick and uniform

white limestone is the last formation one should imagine to have been deposited among the peaks and valleys of a submerged land mass; completely missing out in this area the yellow limestone and other underlying beds which elsewhere are present all over Jamaica. I have never seen pebbles of the granodiorite in the undoubted Blue Mountain conglomerate and in my opinion it is impossible definitely to identify the source of origin of any of the pebbles in that bed. Being, to put it euphemistically, an indifferent petrologist, and not caring very much for joint papers, I preferred to leave out the petrology of the rocks; but I am informed that they do not show any extraordinary features.

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RIFT VALLEY IMPRESSIONS.

SIR,—Dr. Shand's paper, published in the *GEOLOGICAL MAGAZINE* for July, entitled "Rift Valley Impressions", is bound to stimulate the differences of opinion which exist as to the origin of those greatly discussed features, the African Troughs. The Professor is but one of many; he is not the only investigator to desert exaggeration and plot sections across the Rifts to true scale and thereby to discover how insignificant these mighty rents become, or to comfort himself, if so he did, with the reflection that any of the earth's great features would be equally reduced to truer though less spectacular proportions if similarly treated. This, by the way. The interest of the African Troughs lies in their length and disposition, not their depth.

Speaking for myself, the Eastern Valley is not particularly impressive when seen from the air between Kisumu and Nairobi, and I am aware how comparatively insignificant it may appear when entered, say, from Rumuruti on a journey to Nakuru.

Lake Tanganyika, as seen between Kigoma and Kipili, is not at all diagrammatic when judged by the usual Rift standards. On the other hand, the outlook over the Rukwa Trough from the western edge near Sumbawanga is as astonishing as the view over the sunk-land of the Coastal Belt of British Somaliland seen from the edge of the escarpment east of Sheikh, part of course, of the same great system of faults. "Astonishing" is, on the whole, too weak a word. Even so, whether in Tanganyika Territory or in Somaliland the effects of erosion are sufficiently conspicuous. The structure of the Magadi section of the Eastern Rift, the succession of step-faults on the eastern side, the great Nguruman scarp on the west, seen not necessarily from the railway, but from an advantageous point near Turoka, is very impressive at dawn or dusk. The same is true of the northern end of Lake Natron. Many of the faults are relatively new. The fact that this "freshness" of the scarps is a function of varying age must be clear to anyone