

Geology. — “Concerning some Erratics of Southern origin in the Dutch Diluvium”. By J. H. DRUIF. (Communicated by Prof. L. RUTTEN).

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In his “Bijdrage tot de kennis der Zuidelijke Zwerfsteen in Nederland en omgeving”¹⁾ CH. OOSTINGH reports the occurrence of ferruginous sandstone from the Upper Oligocene and of loose shells from the same formation (resp. p. 101 and 103).

A short time ago on my visit to the railway-cut near Mook I came by chance upon a ferruginous sandstone, which on closer inspection appeared to contain distinctly recognizable cores of *Pectunculus obovatus* Lamark. On further inquiry I was informed by the stationmaster that a few days previously a fragment of that rock, measuring about $40 \times 20 \times 15$ cm. had been found, and that it contained a good many similar impregnations. But, alas, the workmen, out of curiosity, had knocked it to pieces. The fragment I found was a part of this stone. It is now present in the collection of the Geological Institute of Utrecht. Similar fragments were often found there, as I was told, so that I asked my informant to preserve such finds in future and to communicate with me, which he promised.

On p. 89 of the publication referred to, the occurrence is discussed of the familiar siliceous oolites. To the number of localities mentioned there, I can add one more, viz. “de Stompert” near Amersfoort, where I found a specimen, small but clearly distinguishable, right at the top of the hill. A few days later Mr. R. IJZERMAN brought home more specimens from a visit to the railway-cut at Maarn.

Neither in Dr. OOSTINGH’s publication, nor anywhere else to my knowledge, mention is made of an erratic block found in 1884 by LORIÉ near Zeddum, now present in the Utrecht collection. On re-examining that part of the collection, I was struck by a peculiar green mineral enclosed in it.

The rock under consideration is a common white dyke-quartz, coloured yellow here and there, while a grass-green mineral can be recognized, distributed in irregular aggregations, mostly in spots, sometimes more or less spherical, not in distinguishable crystals.

A chemical examination made out that it contained Cu and P, while on treatment with acid initially some CO₂ is emitted. On heating some

¹⁾ Mededeelingen der Landbouw Hoogeschool. Dl. XIX. Wageningen.

water is given off. It is highly probable, therefore, that we have to do here with one of the minerals from the Lunnite-group ¹⁾).

The habitus is most like Pseudo-Malachite.

The micro-chemical examination confirmed the presence of P.

Now, it is a known fact that in the basin of the Rhine such minerals consisting chiefly of copperphosphate, occur, namely at Ehl near Linz. We may safely conclude, therefore, that the rock originates from that district. Since nothing is known about the occurrence of similar rocks in the basin of the Meuse, we seem to have hit upon a new erratic block characteristic of the Rhine.

¹⁾ DOELTER: Mineralchemie III, 1, p. 437, 1918.