

foregoing underwent extensive denudation. (4) Huronian system, including the Bruce and Temiskamian series. (5) Algonian revolution: the intrusion of the Algonian granites. (6) The Eparchæan interval of denudation. (7) This was followed by the deposition of the Animikian and Keweenawan series, forming the Algonkian system, which the author prefers to regard as being the base of the Palæozoic. This concise statement will do much to simplify and render clear a subject in which much confusion has hitherto prevailed, largely owing to an unnecessarily cumbersome nomenclature, but partly also due to uncertainty in the correlations.

VI.—MUSCHELKALK ICHTHYOSAURS.—Von Huene's manuscript on the Muschelkalk Ichthyosaurs, dated autumn, 1913, has just appeared in *Palæontographica*, vol. lxxii, pt. i, June, 1916. The work consists of 68 pages, 7 plates, and 96 text-figures, and is of the greatest use for comparison and study. Von Huene describes the genera *Mixosaurus*, *Cymbospondylus*, *Shastasaurus*, *Pessosaurus*, and a new genus *Pachygonosaurus*, founded on a few vertebræ in the Berlin Museum, indicative of two species to which no trivial names are assigned. The illustrations are abundant and good.

CORRESPONDENCE.

ROPY SURFACES OF LAVA IN ICELAND.

SIR,—In last month's GEOLOGICAL MAGAZINE, writing of the ropy lava surfaces so characteristic of large areas of the Icelandic deserts, I remarked on never having seen similar surfaces in the Tertiary series of Iceland, and added that they do not seem to have been noted in the British Isles.

I find, however, that basalts with ropy surfaces were observed in the Færøe Islands by Sir George Mackenzie and described by him to the Edinburgh Royal Society in 1812. Mackenzie's paper (Trans. Roy. Soc. Edin., vol. vii, p. 213, 1814) contains a natural size illustration of ropy basalt. He writes: "The surfaces of many lavas which I passed over in Iceland were not unlike coils of rope or crumpled cloth, an appearance which we should expect to be assumed by any viscid matter in motion. On our first visit to the island of Naalsøe we observed the surface of a bed of amygdaloid, which had been exposed to a considerable extent by the removal of the bed above, exhibiting an exact picture of the lavas I had seen in Iceland" (p. 221). Mackenzie states that whatever doubt may have previously existed in his mind as to the igneous origin of the 'trap' was dissipated by the discovery of these ropy surfaces.¹

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¹ In reference to the footnote to my paper, GEOL. MAG., Sept. No., p. 390, I find that Dr. Pjetursson now regards his "Graa Etage" of Middle Northern Iceland as of Post-Tertiary age. This view presents difficulties, and I prefer to hold to his former idea as there indicated. The doubt I expressed relates, not to the Tertiary age of the "Graa Etage", but to the adequacy of the evidences therein of a general "glacial period".