

in the south-east of Ireland. Vigorous efforts have been made to determine the relative ages of the great groups of grits and slates in Devonshire and Cornwall. Important details are given of the work done in the Coalfields of North Staffordshire and South Wales. The discovery of Rhætic fossils in the island of Arran is of great interest, although it appears that the specimens were not found actually *in situ*, but enclosed in a coarse conglomerate that fills a volcanic vent, probably of Tertiary age. Other fossils, of Rhætic aspect, have been found in Skye, and some interesting records are given of the strata in South Wales, where evidence has been noticed of the local recurrence in Rhætic beds of the sedimentary conditions which attended the deposition of the Keuper Marls.

Brief references are given to work in Jurassic and Cretaceous areas, and a list of fossils from the Sandgate beds near Midhurst is worthy of mention.

The further work on the Tertiary igneous rocks of Skye leads to the belief that the great gabbro laccolite has a maximum thickness of about 3,000 feet or more. The survey of the Cuillin Hills has been nearly completed. The detailed study of the western part of the range shows the great complexity of its structure, and the very considerable part played by portions of the basaltic lavas entangled in the gabbro and highly metamorphosed. The gabbro itself consists of numerous distinct intrusions in the form of wedges, sheets, and tongues.

Many interesting facts relating to the Glacial Drifts and newer deposits have been gathered. Especially noteworthy is the conclusion that the raised beach of the Gower promontory in South Wales, between Bacon Hole and Mumbles Head, is pre-Glacial or Interglacial. The bone-beds which rest upon the raised beach in the caves are continuous with a layer of 'head' which overlies the beach. Glacial Drift lies upon these deposits.

Records of the petrographical and palæontological work and lists of publications are given at the end of this "Summary of Progress," which displays throughout the evidence of much painstaking and enthusiastic labour.

CORRESPONDENCE.

FINE SECTION OF BOULDER-CLAY AT CRICH.

SIR,—Geologists interested in the glacial deposits of the Midland Counties will no doubt be glad to hear that a very fine section of Boulder-clay, which rests upon a striated floor of Mountain Limestone, is now to be seen in Derbyshire near the village of Crich (Matlock Baths). The presence near this place of a great mass of Boulder-clay containing erratics foreign to the county has been known for a number of years. Recently the quarry cutting into this clay has been re-worked, a steam navvy having been set to work to clear the clay off the limestone. Mr. Arnold-Bemrose and I visited the quarry on November 25, 1899, and found that an excellent section of 'till'

resting upon limestone was exposed. The 'till' reached a thickness of at least 40 feet in places, and rested upon a striated floor of limestone rock. The Boulder-clay is a tough reddish or bluish deposit, with streaks or patches of sand, sandy gravel, or sandy clay. The whole deposit is thickly studded with boulders, both large and small, most of which are finely polished, striated, and grooved. Limestone, gritstone, sandstone, and quartzite are the most common rocks, but toadstone and various greenstones and granites are by no means rare. On the last occasion on which we visited the quarry we found that the clay had been cleared off the limestone over a large area, exposing a floor finely striated, polished, and grooved over its whole extent. The striations run N. 20° W., indicating an ice-flow coinciding roughly in direction with the neighbouring Derwent Valley. Mr. Arnold-Bemrose and I have been at work for some years examining the numerous Boulder-clay deposits and erratics this ice-flow has left behind it at points higher up the valley than Crich, and we hope to be in a position to deal somewhat fully with the glaciation of North Derbyshire in the near future. The deposits formed by the ice which crossed the watershed into the Wye Valley near Buxton have already been traced over large areas south of the Trent. In these deposits the boulders are "such as would be brought down by glaciers descending the valleys of the Wye, Derwent, and other northerly and westerly tributaries of the Trent, debouching into and crossing the valley of the latter river."¹

R. M. DEELEY.

38, CHARNWOOD STREET,
DERBY.

OBITUARY.

PROFESSOR HANS BRUNO GEINITZ.

BORN OCTOBER 16, 1814.

DIED JANUARY 23, 1900.

H. B. GEINITZ was born at Altenburg on October 16, 1814, and studied at the Universities of Berlin and Jena, taking the degree of Ph.D. in 1837, with a thesis on the *Muschelkalk* of Thuringia. He went to Dresden in 1838 to take part in the work of the Royal Technical High School, in which he became Professor of Mineralogy and Geognosy in 1850, maintaining his connection with that establishment until 1894. In 1857 he was made Director of the Royal Mineralogical and Geological Museum, which post he also held until 1894. His work related chiefly to Saxony, and to it we are specially indebted in regard to the palæontological relations of that kingdom, but it also extended over other parts of Europe. Amongst his more notable works are those on the Fossils of the Coal-measures of Saxony, on the Cretaceous Formations of Saxony, comparing them with those of England, on the Animal Remains of the Dyas, and on the *Elbthalegebirge* of Saxony, and these are the more valuable from being well illustrated. He was one of the editors of the "*Neues Jahrbuch für Mineralogie und Geologie*" from

¹ Q.J.G.S., 1886, p. 440.