

of the central part of the Loch Awe Syncline with their high structural position. The hypothesis is that these rocks were not deeply covered during their metamorphism, and accordingly were never raised to any very high temperature.

CORRESPONDENCE.

CRITICAL TEMPERATURES AND CRITICAL CONTROVERSY.

SIR,—Referring to Dr. Johnston-Lavis' letter, I am sorry if I have failed to do him justice. I have a list of eighty of his papers to 1890, none, however, bearing on critical temperatures. If he will send me references to any subsequent ones bearing on the action of superheated water I shall be obliged.

And now I must throw myself on your Editorial leniency and that of your readers.

On the day I received the proofs of the article which appears this month I suffered a serious nervous collapse, and am under strict orders to spare myself in every way, and this just at a moment when the Survey Memoir of Dartmoor makes it incumbent on me to review nearly thirty years of observation of that district; and Mr. Jukes-Browne's papers on "The Making of Torbay" and on "The Torquay Limestones" do the same for about forty years' reflections on the raised beaches and general geology of that district! In addition to this there is a good deal that wants saying about Kent's Cavern.

I am very sorry to have broached subjects in your columns which I cannot for the moment now defend, in critical controversy, but I will try to meet any objections, or yield to them, if possible later on. If not in this Magazine, then somewhere else.

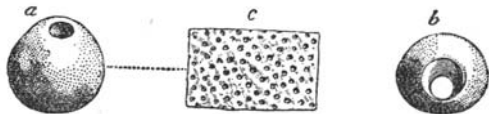
A. R. HUNT.

SOUTHWOOD, TORQUAY.

March 7, 1913.

PREHISTORIC BEADS.

SIR,—As a supplement to my letter in the *GEOL. MAG.* for March, p. 138, and your reply thereto, pp. 139–43, I send you the following quotation from Sir Charles Lyell's *Antiquity of Man* (4th edition, p. 165). He writes as follows: "In the gravel-pits of St. Acheul, and



a, b, Porosphaera globularis, Phillips, copied from Lyell's *Antiquity of Man*, 4th ed., p. 165, fig. 22, 1873; *c*, part of same magnified.

in some others near Amiens, small round bodies, having a tubular cavity in the centre, occur. They are well known as fossils of the White Chalk. Dr. Rigollot suggested that they might have been strung

together as beads, and he supposed the hole in the centre to have been artificial. Some of these round bodies are found entire in the chalk and in the gravel, others have a hole passing through them, and sometimes one or two holes penetrating some way in from the surface, and not extending to the other side. Others, like *b* in Figure, have a large cavity, which has a very artificial aspect. It is impossible to decide whether they have or have not served as personal ornaments, recommended by their globular form, lightness, and by being less destructible than ordinary chalk. Granting that there were natural cavities in the axis of some of them, it does not follow that these may not have been taken advantage of for stringing them as beads, while others may have been artificially bored through. Dr. Rigollot's argument in favour of them having been used as necklaces or bracelets appears to me a sound one. He says he often found small heaps or groups of them in one place, all perforated, just as if, when swept into the river's bed by a flood, the bond or string which had united them together remained unbroken.¹"

J. T. BANTON.

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OBITUARY.

RUSSELL FROST GWINNELL,

B.Sc., Assoc. R.C.Sc., F.G.S.

BORN APRIL 21, 1880.

DIED MARCH 15, 1913.

WE deeply regret to record the death of Mr. R. F. Gwinnell, at the early age of 33 years. He had been for some years Demonstrator in Geology under Professor W. W. Watts, F.R.S., in the Imperial College of Science and Technology, South Kensington, and also an Examiner in Geology to the Board of Education. Mr. R. F. Gwinnell was a bachelor living at home with his parents, his father, Mr. Wintour F. Gwinnell, B.Sc., F.G.S., 34 Barrowgate Road, Chiswick, W., being a well-known University 'coach' and an accomplished science teacher of long standing.

MALCOLM POIGNAND.

BORN 1850.

DIED MARCH 2, 1913.

WE regret to record the death on March 2, in his 63rd year, of Dr. Malcolm Poignand, of the Beeches, Walsham-le-Willows, Suffolk. He was a member of the Geologists' Association, and took an active interest in geology, having collected many fossils from the Jurassic strata of Dorset and other formations, some of his specimens being referred to in the Proceedings of the Association (vol. ix, p. 204). He received his medical education at St. Bartholomew's Hospital, and subsequently at Aberdeen University, where he took the degree of M.D. in 1878.

¹ Rigollot, *Mémoire sur des Instruments en Silex, etc.*, p. 16. Amiens, 1854."