

CORRESPONDENCE.

THE SUPPOSED DICYNODONT FROM THE ELGIN TRIAS.

SIR,—At the meeting of the British Association at Aberdeen in 1885, much interest was excited by the alleged discovery of *Dicynodon* in the Triassic sandstones of Elgin. Professor Judd stated his belief in the specimen at the time (“Nature,” Oct. 15, 1885, p. 573), and said that the specimen was in the hands of Dr. Traquair. In Woodward and Sherborn’s “Catalogue” (1890) I notice these authorities place a (?) before the reference, thus indicating the doubtful nature of the find, while Lydekker in vol. ii. “Manual of Palæontology” does not even refer to it. Are we to interpret Dr. Traquair’s six years’ silence as a withdrawal of the original determination? When an important discovery has been announced, it seems only just that the geological public should hear more about it, and this practice of throwing out vague and unsatisfactory statements is very annoying to those who prefer exact information and rather disparaging to the discoverer, who naturally expects so great a find to be worthy of notice.

G. ROOPER.

ON DYNAMO-METAMORPHISM.

SIR,—I think Dr. Irving has not quite understood the reasoning in my short article on Dynamo-metamorphism of a year ago. I wrote, that the part of the work of compression expressed by the product $(P - W)w$, where P is the compressing force upon a cubic element of the disturbed mass, W the weight of the cover, and w the height through which the cover has been lifted, was employed in bending and breaking the rock and overcoming friction, and that, since this part of the energy is not reconvertible into mechanical work, it must take the forms of heat and chemical action. He thinks this “last term is surely outside the others altogether”; that is, I suppose, is employed upon the rock external to the portion of it under consideration. But the expression is not very clear, though his illustration in the note (p. 300) seems to show that such is his meaning. He says there that, if a horse or engine draws a series of loaded trucks along a perfectly horizontal line of rails, “work is done in overcoming the friction of the wheels against their axles and against the rails, and in the displacement of a portion of the atmosphere with the movement of the train; but would any one contend that energy was stored up in the train?”

Energy of motion is so obviously stored up in the train that Dr. Irving cannot refer to that. He must refer to the energy imparted to the atmosphere, and to the energy absorbed by friction, which last is distributed between the trucks and the rails. The energy communicated to the air is “outside” the other effects, and so is the energy absorbed by the rails. But the energy absorbed by the friction of the wheels against their axles is partly converted into heat, and is partly employed in producing a molecular change in the iron, rendering it more granular and liable to fracture. I should consider this a case of dynamo-metamorphism. Still it appears to