that Q and P are at every moment of time uniquely connected when $u<v$. Any value given to t fixes a corresponding value t_1 for Q, and its position as well. This formula (8) is a very curious way of representing **E**, and physically very unnatural. But the form of the first part is such that it leads easily to the radiational formula above given. Reject the second part of **E** in (8), because it varies as R^{-2}. Then carry out d^2/dt^2, and reject the R^{-2} part again. There is left

$$\mathbf{E}=\frac{\mu Q}{4\pi R}\left(\ddot{\mathbf{R}}-\ddot{R}\mathbf{R}_1\right) \qquad (9)$$

Lastly, put $\mathbf{R}=\mathbf{r}-\mathbf{s}$; then $\ddot{\mathbf{R}}=-\ddot{\mathbf{s}}$; and if s/r is very small, $\ddot{R}=-\ddot{\mathbf{s}}\mathbf{r}_1$. So we come to the formula (1) above, as required. I hope this will be satisfactory. If not, there are lots of other much more complicated ways of doing the work.

OLIVER HEAVISIDE.

January 28.

Corrections in Nomenclature: Orang Outang; Ca'ing Whale.

KINDLY allow me a line or two in NATURE to point out that *Orang outang* is not the correct designation for the large anthropoid of Borneo and Sumatra, although it has now obtained, perhaps, what may seem a prescriptive right in our language. Nevertheless, it is as well to be accurate as not. *Orang utan* (or *outan*, if preferred), the correct Malay name for this ape, signifies (as is well known) *Orang*, man, and *utan*, forest, *i.e.* the forest man, in contradistinction to the *Orang dusun*, or village (civilised) man. *Orang utang* (or *outang*) is nonsense. *Utang* means *debt*, something *owing*. The correction has been made often before, but the occurrence of the erroneous combination in the latest abstract of the *Proceedings* of the Zoological Society and in a recent zoological work induces me to venture, in the interest of accuracy and of those who understand the Malay language, again to direct attention to the proper spelling.

In a previous issue of NATURE (March, 1901) you kindly afforded me space to point out the erroneous use also of '*ca'ing*" for "*ca'in*," as the Anglicised (or Scotticised) appellation for *Globiocephalus melas*. My friend Sir H. H. Johnston, I observe, in his recent elegant work on British mammals uses "ca'ing whale." I hope he will accept this small correction for his second edition. Ca'in is, of course, really equivalent to "call in." "Call" in the Scottish vernacular = ca' = drive: the "drive in" whale. Here the use of "ca'ing" = calling would be inappropriate, as the *whale* does not "call," either in the sense of "bellow" or "drive." If, however, it be argued that "ca'ing" does stand for "calling," the essential word "in" is omitted, and ought to be supplied. The pilot whale is the species, which in the islands to the north of Scotland so frequently occurs in large "schools," when it is invariably "driven in" for capture on the shore by a surrounding fleet of boats.

HENRY O. FORBES.

Museums, Liverpool, January 30.

Strange Winter Scenes connected with Lough Neagh.

AT the close of the long frost in February, 1895, strange phenomena occurred in connection with Lough Neagh, in the north of Ireland, the largest lake in the United Kingdom, and one of the larger ones of Europe, covering as it does an area of upwards of 150 square miles. The lake had been frozen over for a fortnight, and thousands of people had indulged in skating on ice almost as smooth as glass.

On February 22, the last day but one of the skating, though unknown to the multitudes gathered near Antrim, the ice in the central portion of the bay broke up, but left intact a sheet of about a third of a mile wide along the south-eastern shore. At a point about six miles from Antrim, this unbroken shore portion was at intervals of a few yards for a mile and upwards raised into little tunnels or bridges, from beneath which pieces of ice, large and small, along with some boulder stones of considerable size, were shot on to the land, eventually forming a ridge varying in height from two to fourteen feet, and perhaps twenty feet broad at the base. The jingling and crashing heard during the operation, which lasted for two days, were very great, and to some persons residing near most alarming. Ice has often been seen piled up along the shore at certain points, five or six feet high, but this has been shore ice thrown up by waves, whereas the ridge referred to was not shore ice, that, as stated, remaining unbroken for a third of a mile out.

I met with only one person who had witnessed a similar scene to the one described. She had resided near the lake all her life, and remembered the long frost of 1814–15, when the lake was frozen over and a great ice ridge was thrown up. On both occasions a person could walk along the road near the lake and yet not see it, in consequence of the intervening ridge. Where did the ice forming this ridge come from? And what was the force employed to convey it to, and shoot it on to the shore?

At a spot on the same south-eastern shore of Antrim Bay, about midway between that previously mentioned and Antrim, a similar scene in one respect, but on a greatly reduced scale, was witnessed. A man when passing along a lonely, wooded part of the road, at a considerable distance from the lake, heard great hissing and fizzing, in a jerky, intermittent manner. On making his way through the underwood to the place from whence the sounds proceeded, he was astonished to see a large stone, estimated to be several hundredsweight, being ejected from beneath the raised ice, and at the same time large quantities of water squirted from the apertures near it. Immediately the propelling force ceased, the stone fell back and the squirting stopped. It was somewhat risky to venture near, but three persons did so to see if they could withstand the propelling force of the water giant, but they found the effort ineffectual, and got drenched for their pains. Through some obstruction, or the stone being too heavy, it was not ejected from the lake.

It would be interesting to know the causes of these phenomena, and also whether they have been observed in connection with lakes elsewhere.

If further information is desired by any reader interested in this matter, I shall be happy to give it if able.

The Manse, Antrim, January 26. W. S. SMITH.

The α Rays of Radium.

IN Mr. Soddy's article on radio-activity in your issue of January 28, he remarks as peculiar the fact that the α rays possess the "property of being more difficult to deviate for any given strength of field the greater the distance of air traversed." Surely if these rays consist of positively charged material particles, their velocity must diminish in proportion to the distance of air traversed, and hence their magnetic effect, and consequently their deviability, must diminish also.

I have unfortunately missed Prof. Rutherford's proof as to the probable difference in speed with which the α particles from the successive disintegrations are shot off. Could Mr. Soddy supply the reference, as there seems no obvious reason why this should be so?

J. T. NANCE.

Bromsgrove School, Worcestershire, February 2.

IT is true, as Mr. Nance points out, that the velocity of the α rays may be expected to diminish in proportion to the distance of air traversed, and it follows, therefore, that the magnetic deviability should correspondingly increase, for the displacement experienced by the particle in unit time by a constant magnetic force from the position it would occupy if no force were acting is constant. With diminishing velocity the displacement in unit distance, and therefore the angular deviation, must increase.

The complexity of the α rays of radium was referred to by Prof. Rutherford in his paper in the *Phil. Mag.* for February, 1903, in a footnote to p. 184. Only 25 per cent. of the α rays come from the radium, the remainder originating from its successive disintegration products, viz. the gaseous emanation and the matter causing the excited activity. As these three types of matter have no resemblance whatever in their material nature, it would be a remarkable coincidence if the α particles expelled in their several disintegrations happened to possess the same momentum in each case. This is the condition necessary for the α rays of radium to be deviated as a homogeneous pencil in a magnetic field.

FREDERICK SODDY.