horizon at which midsummer sunrise occurred at that date.

To enable us to discuss intelligently the probability of an *intentional* orientation by the Stonehenge builders, it is necessary in the first place to ascertain the approximate date at which midsummer sunrise actually occurred in line with the axis. This problem has been dealt with from time to time by different experts, and most completely by Sir Norman Lockyer. The methods adopted for this investigation are set forth in the present writer's recently published work on Stonehenge, in the chapter on "Astronomical Considerations," to which the reader is invited to refer.

On the data there set forth Lockyer found the obliquity of the ecliptic which would cause midsummer sunrise to take place at a point on the horizon on the line of the axis to be 23° 54′ 30″. According to Simon Newcomb (the eminent American astronomer) the date at which the ecliptic made this angle with the equator was about 1840 B.C.

Owing to want of precision in the data Lockyer considered that the possible error might affect the date to the extent (plus or minus) of as much as 200 years. We may conclude, therefore, that—as determined by astronomical considerations—the date at which midsummer sunrise occurred on the line of the axis of Stonehenge was sometime between 2040 B.C. and 1640 B.C.

Now it will be observed that this is just about the date now generally agreed by archæologists as the probable date of the building of Stonehenge.

We may conclude, therefore, that the builders of the present structure of Stonehenge did, as a matter of fact, direct the axis of their new building, either exactly or very nearly, to the point on the horizon at which the sunrise at midsummer then took place. It may, of course, be contended that this remarkable agreement is a mere chance coincidence. The fact, however, remains as stated.

The accuracy of Sir Norman Lockyer's calculations has never been questioned, and the results obtained can readily be checked by any competent computer. The margin of error (200 years either way) appears sufficient to allow for any want of precision in the data.

E. HERBERT STONE.

The Retreat, Devizes,
May 1.

A Stranded Cetacean.

A BRIEF account of the stranding of a Cetacean in the neighbourhood of Langness, Isle of Man, will probably interest many readers of NATURE. This event was reported to me and my colleagues on Saturday, May 9, and in the afternoon of that day I accompanied Mr. J. R. Bruce to the spot, which is a small creek on the Langness peninsula. Here we were joined by Mr. P. M. C. Kermode, Curator of the Manx Museum, Douglas, and along with him we obtained a good series of measurements and photographs. From these we conclude that the specimen is a rorqual (Balænoptera sp.), but this identification awaits confirmation. From the measurements obtained I select the following: Length, from tip of upper jaw, along back, to notch between tail-flukes, 48 ft. 6 in.; breadth of tail, from tip to tip of flukes, 11 ft. 8 in.; tip of upper jaw to centre of eye, 9 ft. 8 in.; length of pectoral fin, anterior insertion to tip, 5 ft. 6 in.

H. C. CHADWICK.

The Biological Station,
Port Erin, Isle of Man,
May 11.

Lightning.

EVER since I was a child I have heard of the idea that lightning makes a "swishing" noise when one is quite close to it, but I have looked on this as a popular superstition. I have recently, however, had occasion to wonder whether there may not be some foundation for the idea. On April 24 there was a very severe thunderstorm here, quite a number of flashes having been within a kilometre and a half of this house; a barn was struck one kilometre away, and probably also a cottage 450 metres in another direction. During the storm three men were working in a field; two of them were together close to a holly tree in a hedge; there was a very bright flash of lightning, with a just perceptible interval between the flash and the thunder. At the moment of the lightning there was quite a loud swishing sound in the holly tree, as though, they said, a sudden blast of air went through the tree; the sound occurred definitely before the thunder.

At about the time of the occurrence the wind rose to 30 miles per hour and gradually fell off to about 13 miles per hour; both men, however, are positive that there was no wind at the time, but that it got up shortly afterwards when the rain began. The flash must have been very close as they both smelt "sulphur"—nitrogen peroxide; and they could scarcely see anything for some moments. The third man was about 230 metres away and was close to an oak tree to which he had his back; he says that when the flash came there was a noise in the tree as though it were "on fire." He turned round expecting to see that it had been struck, but neither oak nor holly showed any signs of having been struck. Is it possible that in the neighbourhood of a flash, brush discharges may take place from trees and other points?

C. J. P. CAVE.

Stoner Hill, Petersfield, Hants,
May 12.

Decay and Regeneration of Radio-luminescence.

IT is well known that the luminescence produced in certain materials subjected to the action of the radio-active rays decreases with time and that the colour of the luminescence changes, while at the same time the material itself also changes in colour. From experimental work covering more than two years and still under way, we are led to believe that the decrease in luminescence of phosphorescent zinc sulphide, etc., is probably due to the masking of the radiation luminosity by the colour which the material acquires, due to the action of the radiation.

For example, small glass tubes containing radon initially glow quite brightly with a yellowish-green light, but the glass soon turns either brown or blue, and in the course of a few days the tubes glow very faintly, if at all. If the tubes be heated sufficiently just to discharge the coloration, the glow returns. This operation can be repeated with no apparent change in the property of the glass to glow under the action of the radon rays.

The coloration of the glass is not a surface phenomenon, and the colour produced, whether brown or blue, seems to reach a colour depth beyond which further radiation produces no apparent increase in the coloration.

Since the observation of the behaviour of glass under radiation and the restoration of its luminescence by discharging the coloration by heating, phosphorescent zinc sulphide has been investigated. Here again the visible radio-luminescence and the