

'Bridlington Crag' Shells

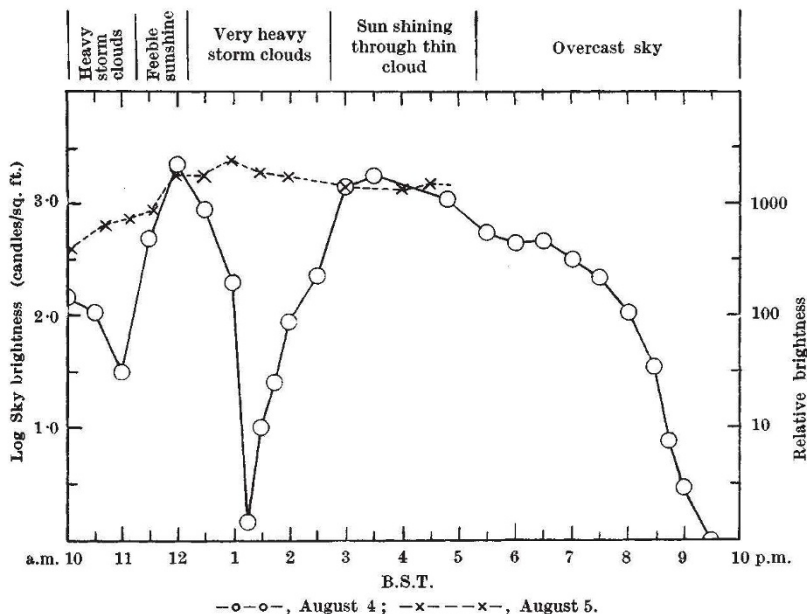
MANY years ago, Mr. W. Headley, a relative of the late G. W. Lamplugh, had an extensive collection of shells from the so-called 'Bridlington Crag' exposed during excavations near the shore at Bridlington. This contained a number of 'types' which had been referred to in the *Quarterly Journal of the Geological Society of London*, vol. 47, 1891. We have been endeavouring to trace these, but have recently ascertained that, before he died, Mr. Headley sold some of his collections, and possibly these were among them. Inquiry has been made as to their whereabouts in the most likely channels, but without result. Is it possible any readers of NATURE can help us, as it is desirable to know where they can be consulted?

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Sky Darkening Associated with a Severe Thunderstorm

IT may be of interest to record some observations made here of the abnormal degree of sky darkening associated with a very severe thunderstorm which



affected a large area of south-west England during the morning and early afternoon of Thursday, August 4, 1938.

Observations of the brightness of the sky in the zenith were made by me at frequent intervals during the day with a Weston photo-electric (barrier layer) photometer calibrated directly in brightness units, namely, candles per sq. foot. A neutral (silver deposit) screen of known transmission factor, used in conjunction with the photometer, enabled measures to be obtained of brightness values which lay outside the scale range of the instrument. The photometer was exposed in a horizontal position, the sky radiation received being restricted to a cone of solid angle 60°. The complete series of observations is shown graphically in the accompanying figure, the logarithm of the photometer reading being plotted in order to form a convenient ordinate scale. A scale

of relative brightness has been added to facilitate interpretation of the graph. The comparison (broken) curve is that for the following day, August 5, when no precipitation took place during the period of observation, and the sky was continuously overcast. Notes of sky conditions along the upper margin of the figure refer to the day of the storm.

It will be seen that, during the period of most intense storm activity, a wide and rapid fluctuation of sky illumination occurred. Within a period of one hour, from 12.15 p.m. to 1.15 p.m. B.S.T., the brightness value had fallen from 1500 to 1.5 candles/sq. ft. It would appear that the latter value, the absolute minimum recorded, is an unusual one seldom associated with storm centres developing in these latitudes. The abnormally low brightness of the sky is here indicative of a great vertical extent of the cumulo-nimbus cloud layer passing over the observer.

An equally striking return of skylight ensued as the storm centre moved away in a north-west direction. Half an hour after the minimum brightness had been recorded, a reading of the photometer indicated a ten-fold increase in the illumination, and by 2.30 p.m. B.S.T. the reading had risen to 225 candles/sq. ft., the storm clouds being then in process of dispersion. Thereafter, with a 'broken' sky veiled in alto-cumulus and cirro-stratus cloud through which the sun shone feebly, the sky brightness approached a more normal level, a value of 1770 candles/sq. ft. being recorded at 3.30 p.m. B.S.T. By reference to the figure it will be seen that at 9.15 p.m. B.S.T. the normal twilight illumination had fallen to the same value of sky brightness as that observed soon after midday, when the most severe phase of the thunderstorm was being experienced.

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Dillenian Correspondence

IN the notice in NATURE of July 2, p. 18, of the recent acquisition by the Department of Botany, British Museum, of a large number of drawings by Dillenius and some manuscript, a 'feeler' was put out about the possibility of Dillenius's correspondence similarly coming to light.

A day or two later, having occasion to consult Dawson Turner's correspondence of Richard Richardson (1835)—a book much less well known than it deserves to be as it contains much information about eighteenth-century botanists—I happened across a footnote in the preface (p. ix): since, so far as my inquiries go, this seems to have been overlooked by botanists, it seems worth reprinting.

"As, in speaking of the correspondence of Sloane and Sherard, I have mentioned the advantage derived to science from the preservation of such letters, so is it right here to notice an unfortunate event of an opposite tendency, whereby it is impossible to say how much we may have lost. The event I