The Sea-Serpent Explained

ON Monday, August 5, a number of geologists crossed in the Folkestone boat to Boulogne, to study the interesting formations of that neighbourhood, and, when about three or four miles from the French coast, one of these gentlemen suddenly exclaimed, "Look at that extraordinary object passing across the bow of the steamer, about a mile or a mile and a-half in advance of us!" On turning in this direction there was seen an immense serpent, apparently about a furlong in length, rushing furiously along at the rate of fifteen or twenty miles an hour; it was blackish in front and paler behind; its elongated body was fairly on the surface of the water, and it progressed with an undulating or quivering motion: *mirum erat spectaculum sane*.

Of course many suppositions were immediately started to account for this extraordinary phenomenon, but they quickly changed and settled into the fixed idea that the object before them could be nothing less than the great sea-serpent himself; for,—

"Prone on the flood, extended long and large,
Lay floating, many a rood, in bulk as huge
As whom the fables name of monstrous size,
Leviathan; which, God of all his works
Created hugest, that swim the ocean stream."

The writer fortunately had with him one of Baker's best opera-glasses, and, after a few moments' use of this little instrument, the wonder was satisfactorily resolved. The first half of the monster was dark and glittering and the remainder of fainter hue, gradually fading towards the tail. The glass did not determine the matter until the extreme end was reached, and then it was seen to consist of a mass of birds in rapid motion; those that were strong on the wing were able to keep well up with the leaders, and so make the head appear thicker and darker by their numbers, whilst those that had not such power of flight were compelled to settle into places nearer and nearer the tail. Doubtless these birds were shags (*Pelicanus cristatus*) returning to their homes for the night from the distant waters in which they had been fishing, during the day; perchance it may be wrong to assert positively as to the variety of bird, but inasmuch as the writer has often seen shags on the Cornish coast in smaller numbers returning in single or double file to their roosting places, and since it is stated in works of natural history that they have been noticed occasionally flying in this peculiar manner to the number of a thousand or more, it does not appear an unwarranted liberty in supposing that they really were *Pelicanus cristatus*.

It is to be feared some of the geological gentlemen still doubt the interpretation of the lorgnette, preferring the fond deceit of a large and unknown serpent; but as in this case individual birds (scores of them) were distinctly seen flapping their wings, the writer has thought it his duty to report, the circumstance to you that your readers who voyage across the seas may keep their opera-glasses in their pockets and verify for themselves, on the first opportunity, this interpretation of the great sea-serpent.

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Parental Affection in Sparrows

I SAW a touching little incident showing the affection of sparrows for their young on the Kennington Oval cricket-ground last Thursday afternoon, a description of which you may, perhaps, think it worth while to record.

The afternoon was fine and the ground was surrounded by a dense ring of spectators, when a young pale-coloured sparrow, under the guidance of both its parents, was trying to acquire the use of its wings. A slight wind was blowing towards the spectators, and the poor little bird, in its weak attempt to fly, was, to the evident consternation of its parents, carried straight into the laps of the inner ring of spectators, one of whom caught it gently in his hand and held it.

When taken hold of the young bird gave two or three chirps or calls for help, and the old birds flew to within a few feet of the ring of spectators, and, alighting on the grass in front of them all, began to "beg" for the young bird in the most touching and beseeching manner. This they did by lowering their heads and making the peculiar flutter of the wings by which young birds beg for food from the old ones. This singularly touching appeal moved the hearts of many in the crowd, who called out—"Look! look at the old birds!"—"Don't hurt the young bird!"—"Give it back to them," &c. The anxiety and the boldness of the old birds and their humble beseeching for

the young was so evident as to come home to the hearts of these somewhat rough spectators.

My own feeling certainly was that I could not have believed that a pair of sparrows could possibly have "begged" with such touching humility and tenderness for the safety of the young bird. Their manner clearly displayed their sense of their own want of power to help the object of their affection, they therefore prayed for mercy in their own way, and with so much feeling, as to excite the full sympathy of the crowd looking on, and to make them, for the time, forget the game of cricket they had come there to see.

C. R.

Bristol, August 17

PHYSICS IN PHOTOGRAPHY

IN taking a retrospective glance at the remarkable phenomena exhibited in photography, an endeavour will be made to explain them as far as possible by the light that may be thrown upon them by modern research, and at the same time to suggest extensions which probably may be given to this branch of science by further investigations. We may perhaps be open to rebuke from some for venturing to call photography a science; but surely as long as there are problems in it to be solved which require direct scientific solution, and which perhaps indirectly lead to the research in other directions, so long, at least, must it be something beyond a mere industrial pursuit. It is not the fashion to deny to electricity the honourable distinction of being a science, although it has become an industry in its application to telegraphy; why, therefore, it should be considered correct to consider the study of the chemical action of light upon compounds as something to be remitted to the intellect of those who are merely interested in it commercially, it is difficult to understand. It would surely be much better that men of science who employ photography in their laboratories and observatories, should endeavour to understand the science of attack with the weapon they are using, instead of regarding it as a simply mechanical agency, which is only worthy of the attention of, perhaps, a half-educated assistant. If our men of science who employ both were to be as ignorant of the principles of electricity as they too often are of those of photography, research would be very much restricted in its results; and it may, it is believed, be said with truth that a familiarity with even the first principles of photography would very much extend it. We may remark, by the way, that to instil a love of science into youth, an education in photography would seem to be of great value, as experiments can be made which have a real meaning to the experimenter, and which, by allowing an almost endless variation, offer an unlimited field for the exercise of the reasoning faculties. A study of photography, in short, must encourage the study of chemical and physical sciences, if a distinction may be made between the two.

Photography must undoubtedly be divided into two distinct branches: the direct production of the visible image by light itself, and the development of the invisible image by chemical means. The recognition of the former we owe to Wedgwood, and of the latter to Daguerre. The discovery of the former is much less remarkable than of the latter, since, without any particular research, a discoloration of a compound by light must have been noticed, whereas the development of an invisible image would have been a matter of theoretical reasoning, unless accident showed its feasibility. We know that the development of Daguerrean images was discovered accidentally by Daguerre, and we also know that the development of the image on paper was discovered accidentally by Reade. Without two such wonderful strokes of good fortune the growth of photography might have been retarded for years. The years which succeeded the discovery of the developable image were productive of research into many of the phenomena exhibited by the action of light on sensitive compounds, and, owing to the great intellects