

lector and receiver, detachable from each other, but it is poised on a pivot projecting from the floor below, into a conical cavity in the bottom of the receiver. It is also enclosed in a square box, from which, in each case, the cylinder is removable entire for emptying the contents, and the rainfall admits of being estimated in the same way by scales or glass vessels.

A full-sized model of this instrument has been made, and was exhibited at the annual meeting of the Scottish Meteorological Society in July last, and a notice of it appeared in the account of the proceedings of the meeting in the Edinburgh papers of July 4, 1872. It has likewise been exhibited at the Meteorological Office, Victoria Street, London, and its construction has been approved of by several naval officers, and others specially interested in rainfall.

I may add that some gauges are being constructed, with the view of being used on board such steamers as would permit of their being placed under the superintendence of interested and scientific officers.

I hope by-and-by to be enabled to present to the readers of NATURE some results of the observations made by these gauges, which may lead to an introduction of such instruments as part of a ship's equipment, and so to put them in possession of some trustworthy observations of the rainfall at sea

W. J. BLACK

Star Shower in 1838

I AM not sure that the following extract from my note-book may not have been printed by the British Association; but even in that case it may be thought suitable for reproduction at the present juncture.

"1838. Dec. 7.—A great number of falling stars were observed between 6^h and 7^h. In about half-an-hour 40 were counted, sometimes by one, sometimes two, sometimes three observers—two at a medium. They were of all magnitudes up to the first: the larger dissolved into a train of light, but left no train behind them: the S. and W. quarters were chiefly observed, but their prevalence seemed to be universal: they all fell in nearly a vertical direction, but those in the N.W. and S.E. quarters inclined towards the S.W. The colour of the more conspicuous ones seemed to verge towards orange. Their courses were of no great length. There was at the same time a pale auroral light along the N. horizon from N.W. to N.E., apparently equally extended on each side of the true meridian. The Meteors were not watched after 7^h, but about 11^h upon looking out again I saw one, the only one in several minutes, in the S.W.; but it had no longer a vertical direction, its course pointing now to the N.W.

"For account of this phenomenon as observed by Mr. Mavery at Gosport, see 'Proceedings of the Meteorological Society during the session 1838-1839,' p. 9."

T. W. WEBB

Salmonidæ of Great Britain

IN reply to the Rev. W. S. Symonds's questions (NATURE, Vol. vii. p. 162) regarding the occurrence of certain salmonoids in Welsh and non-glacial lakes, I beg to draw his attention to the sixth volume of the "Catalogue of Fishes," published by the trustees of the British Museum, which, I believe, contains the information for which he asks. I would with pleasure extract this information for him if I were not ignorant as regards the glacial or non glacial character of some of the lakes. The geographical distribution of the various kinds of Charr is given in detail on pp. 125-154, and that of the *Coregoni* on pp. 172-199. The group of Charr and that of *Coregoni* are by no means limited to lakes, many true charr, like *Salmo, fluviatilis, fontinalis*, &c., being more or less exclusively river-fish; and *Coregonus oxyrhynchus* being common in salt water on the coasts of Holland at certain seasons of the year. In addition to Sir Philip Egerton's observation that he has taken *Salmo ferox* in Lake Bala, I may mention that the British Museum possesses an example from the Lake of Llanberis, presented by S. P. W. Ellis, Esq. (Catal. Fish, p. 93.)

ALBERT GÜNTHER

British Museum, Jan. 6

M. Figuier and the Origin of American Indians

ON page 484 of Figuier's work, "The Human Race," the author speaks of the Mohawk Indians of the Rio Colorado, and

on the opposite page reproduces M. Mollhausen's drawing of two Mojave Indians, as described in vol. iii. of Pacific R. R. Reports, by Messrs. Whipple, Ewbank, and Turner. As the Mohawk Indians of New York and the North-west are so totally distinct from the Colorado Mojaves, I thought it desirable to call attention to the error.

M. Figuier, I notice, in other portions of his work, finds the origin of the original peoples of America a difficult problem to solve, and I think contradicts himself. He states, on page 16, that, "unless we regard men as a solitary exception among all living beings, unless we withdraw them from the operation of the universal laws of nature, we must come to the conclusion that they do but form a certain number of races of one and the same species, and all descend from one primitive unique species." I do grant that it must have been a very unique species, whose descendants could have varied to the extent that man has. But it is not the question of variation of species that I wish to allude to, but the geography of the question. In speaking of what M. Figuier calls "the red race," pp. 404-406, he states—"The Indians cannot be accurately brought into connection with either the white, yellow, or brown race;" and again, "Probably the population which existed in the new world before the arrival of the Europeans was made up of several types different from those that are extant at present in the other regions of the globes, types having a great tendency to modify themselves, and which were obliterated whenever they came in contact with the races of Europe. But to re-ascend back to this primordial population would now be impossible." There is here a plain acknowledgment of a strictly autochthonic American people, modified since by contact with European races. This latter contact we believe, of course, to be purely imaginative; but if there was an autochthonous people in America, as the "primordial population" of Figuier is supposed to be, how then can "all (men) descend from one primitive unique species?" M. Figuier does not believe in the evolution of man from some pithecoïd creature; he claims to have "shown . . . that man is not derived . . . from any animal." How this stand can be taken, and still the unity of the race asserted to be true, we cannot understand: for surely it cannot be denied now, that man was once lower than the lowest savage, although different from modern savages; and, as in America, there have been found traces of man's presence, as old geologically as those found in Europe; as fossil men have been found in California; and drift implements in the river gravels of the Delaware Valley, on the opposite side of the Continent; and as these implements, in part, show that their fashioners were little, if any, in advance of the beings first worthy to be called men, how could they have descended from a stock in common with the European and Asiatic races? It must have been, indeed, a unique species, whose nearest relations spread over the whole continent of North America; or starting somewhere on the Pacific coast, finally reached the Atlantic, yet made no advance—learned nothing in a slow overland journey of three thousand miles. The "primordial population," of which M. Figuier speaks, we doubt not originated in America; its pithecoïd ancestry may have been European or Asiatic, but if so, the "old world" monkey was somewhat Americanised before it evolved that peculiar red-race which we call the Indians. If there ever was land communication between South America and the "old world" tropics, this pithecoïd man may have reached the shores of the Southern Continent, and lost the ape-like characters after his arrival. Either evolved thus, or created *de novo*, as M. Figuier claims, the American savage is purely an American institution, and upsets that unity which M. Figuier claims for every race, tongue and condition, savage and civilised, throughout the world.

CHARLES C. ABBOTT, M.D.

Trenton, New Jersey, U.S.A., Dec. 23, 1872

THE ZODIACAL LIGHT

FOR several nights lately the zodiacal light has been exceedingly bright and well-defined, and more particularly on the nights of November 24 and 27; on the evening of the 24th I found an explanation of what had often perplexed me before, viz. the existence of a faint,