

A Strange Phenomenon

ON February 18 this part of Scotland was visited by a furious gale of wind, rain, sleet, and hail. The gale subsided considerably about five o'clock in the afternoon. At eight o'clock the sky was fairly clear, when a black cloud sprang up in the north, and the night became suddenly intensely dark. With the darkness came a tremendous shower of hail. All at once I was startled by a vivid flash of lightning close at hand, but without thunder. At the same instant I found myself enveloped in a sheet of pale flickering white light. It seemed to proceed from every part of my clothes, especially on the side least exposed to the hail, and more particularly and brightly from my arm, shoulder, and head. Though I turned about pretty smartly, and shifted my position, I found it impossible to shake off the flickering flames. When I walked on they continued with me for two or three minutes, disappearing only when the violence of the blast was somewhat diminished. I felt no unusual sensation beyond the stinging of the hail, and no sound except that of the storm. Then and since I have puzzled myself to account for the strange phenomenon, and can only imagine it to have been a peculiar manifestation of St. Elmo's Fire, so well known to sailors during thunderstorms within the Tropics. Some of your readers may, perhaps, be able to give instances of a similar occurrence, unique both in my experience and reading.

JAMES MOIR

Schoolhouse, Savoch, Ellon, Aberdeenshire, N.B., Feb. 12

Intelligence in Birds

As it appears to me that in the correspondence to NATURE on this subject no instance has been given of reasoning power in birds, more notable than that afforded by Miss Bird in "Unbeaten Tracks in Japan," I venture to submit the following quotation.

X.

February 15

"I have not said anything about the crows, which are a feature of Yezo, and one which the colonists would willingly dispense with. There are millions of them, and in many places they break the silence of the silent land with a Babel of noisy discords. They are everywhere, and have attained a degree of most unpardonable impertinence, mingled with a cunning and sagacity which almost put them on a level with man in some circumstances. Five of them were so impudent as to alight on two of my horses, and so be ferried across the Yurapugawa. In the inn-garden at Mori I saw a dog eating a piece of carrion in the presence of several of these covetous birds. They evidently said a good deal to each other on the subject, and now and then one or two of them tried to pull the meat away from him, which he resented. At last a big strong crow succeeded in tearing off a piece, with which he returned to the pine where the others were congregated, and after much earnest speech they all surrounded the dog, and the leading bird dexterously dropped the small piece of meat within reach of his mouth, when he immediately snapped at it, letting go the big piece unwisely for a second, on which two of the crows flew away with it to the pine, and with much fluttering and hilarity they all ate, or rather gorged it, the deceived dog looking vacant and bewildered for a moment, after which he sat under the tree and barked at them inanely. A gentleman told me that he saw a dog holding a piece of meat in like manner in the presence of three crows, which also vainly tried to tear it from him, and after a consultation they separated, two going as near as they dared to the meat, while the third gave the tail a bite sharp enough to make the dog turn round with a squeal, on which the other villains seized the meat, and the three fed triumphantly upon it on the top of a wall. In many places they are so aggressive as to destroy crops, unless they are protected by netting. They assemble on the sore backs of horses and pick them into holes, and are mischievous in many ways. They are very late in going to roost, and are early astir in the morning, and are so bold that they often came 'with many a stately flirt and flutter' into the verandah where I was sitting. I never watched an assemblage of them for any length of time without being convinced that there was a Nestor among them to lead their movements. Along the seashore they are very amusing, for they 'take the air' in the evening, seated on sandbanks facing the wind, with their mouths open. They are threatening to devour the settlers, and a crusade is just now being waged against them, but their name is Legion." ("Unbeaten Tracks in Japan," vol. ii. p. 149.)

A System of Meteorological Observations in the China Seas

IN NATURE (vol. xxv. p. 368) you give information about a system of observations and storm-warnings about to be started in the China seas. The scheme itself is excellent, and the choice of Zi-ka-wei (not Sicawei) is also good, only I may express a doubt as to the success of the storm-warnings till a greater area is included. As to the *winter-storms*, some stations in the north-west of China are necessary, and even Kiakhta and Irkutsk would be more useful than Vladivostok, for example, as depressions coming from the west will be earlier felt there than in China. As to the *typhoons*, as they certainly originate east from China, and first travel to the west, telegraphic warnings from Formosa and the Liu-kiu islands would be necessary, otherwise they are apt to reach the coast of China too suddenly. With a chain of stations on these islands between China and Japan it would be possible to observe typhoons at or very near to their origin, to follow them step by step, and save an immense quantity of life and property. A telegraph line uniting these islands to China and Japan is certainly a large undertaking, but as the Japanese will derive great benefit from it, they will probably take part of the expenses.

A. WOBIKOF

St. Petersburg, February 23

New Red Star

The following is a rather noteworthy case of fine red colour in a very small star. It was observed February 7 and 8 as follows:—

R.A. 4h. 59m. 41s. ; Dec. - 22° 3' (1880) mag. 9.5.
It is 29' north and 41s. west of ε Leporis.

EDWARD S. HOLDEN

Washburn Observatory, University of Wisconsin,
Madison, Wisconsin, February 8

Purification of Sewage

In the purification of sewage by the methods of irrigation and filtration it is said that filtration through a depth of ten inches of soil suffices to get rid of the phosphates, may I ask if it is known through what depth of soil it is necessary to filter to eliminate the nitrates?

X.

February 14

THE INTERNATIONAL FISHERIES EXHIBITION

AT last the great International Fisheries Exhibition, to be held in London, and to which we have occasionally referred during the past few months, has taken definite shape. The influential meeting which was held on Monday under the presidency of the Prince of Wales, gives promise that the Exhibition will be one of the most interesting and practically important which have been held in the country. The Berlin exhibition last year was a brilliant success, and the Norwich Exhibition of last spring did much good. Her Majesty the Queen has bestowed her name as patron on the proposed Exhibition; the Prince of Wales is president, and on the long list of Vice-presidents are many nobles, politicians of both parties, well-known representatives of science, and men eminent in various departments. Of the General Committee, the Duke of Richmond is Chairman, and on it are such names as those of Prof. Huxley, Mr. Spencer Walpole, Mr. Francis Francis; while among the Vice-presidents are the names of Mr. W. Spottiswoode, P.R.S., Dr. Günther, Sir John Lubbock, Mr. Mundella. Thus it will be seen that science is amply represented, and especially the science of the subject; and it is fortunate that we have at present as one of H.M. Inspectors of Fisheries so eminent a representative of science as Prof. Huxley.

The project of holding an International Fisheries Exhibition in London is, in a great measure, the result of the success of the National Fisheries Exhibition held in April, 1881, at Norwich, under the patronage of H.R.H.