

stellation Perseus. My observations were unavoidably interrupted. At 10 o'clock I again scanned the heavens, but the shower had then subsided.

ROBERT D. SCHIMPF.

Scranton, Penn., Nov. 28.

Natural gas in Illinois.

In an editorial note in *Science* for Nov. 20, there is a reference to the failure of the natural gas-wells in Champaign county, Ill. In all, there are only about a dozen gas-wells in this county. In two, which are near together, the pressure is about twenty-five pounds per square inch: in the others it is only a few pounds. After personally investigating a number of wells, the writer concludes that there has been no marked decrease in the supply, the failure of any particular well being due to an accumulation of mud and water rather than to an exhaustion of the supply. With one exception, all the wells require pumping out every two or three months. The gas is nearly pure marsh-gas, and is found at a depth of 70 to 90 feet, in a layer of loam from 3 to 12 feet thick. Inferences drawn from the Champaign county wells are inapplicable to the Pittsburg wells.

Near Litchfield, this state, natural gas has been found which in quantity, quality, and source, is similar to that of Pittsburg.

I. O. BAKER.

University of Illinois.

International geological congress at Berlin.

I have just read in *Science* for Oct. 30 your interesting article on the international geological congress at Berlin. Will you permit me to point out one error which has escaped your attention? It is in regard to the bracketed clause which comes at the end of the first column on p. 378: 'the lower . . . beds.' This phrase is inaccurate. Professor Geikie asked for the suppression of the words 'lower carboniferous' and 'calcareous sandstone.' I accepted this without opposition because it was expressly understood that the typical localities referred to in my report (Kilborkan, Marwood, Pilton, Dura Den) ought to be included in the upper Devonian, as the report of the commission defines it.

As to the following sentence, 'The whole paragraph (c) was afterward suppressed,' I do not know upon what it could have been founded. I have not the least recollection that there was any suggestion of the suppression of that paragraph, and you can be sure that such a proposition would have given rise to an animated discussion.

G. DEWALQUE.

Liège, Nov. 13.

The English sparrow.

The American ornithologists' union has collected evidence from all parts of the country where the English sparrow occurs, and has published a report based upon their investigations. As I stated in *Science* (No. 144), they have urged that laws be passed against it, looking to its entire extermination. Acting upon this advice and upon experience with the pest, several states have repealed their protective laws, and the bird is now under the ban. Every one who has seen the bird in the east knows that it drives away native birds, destroys fruit, and is disagreeable in every way.

In regard to a means of destruction, let every

state offer a small bounty for birds and eggs, and the small boys will do the work. A bird is not at all comparable with locusts or mosquitoes. Intelligence, or instinct as we may call it, makes the vast difference. We might persecute insects till the end of time, and they would still come upon us each year; but birds are very quick at seeing whether or not they are wanted. If they are persecuted, they instinctively draw away from man, as in the case of the crow. We may not be able to entirely rid ourselves of the pest, but we can at least succeed in driving them away from the cities; and once get them into the country, where they can be taught to fear the shotgun, and we shall have them at least under our control. They can be driven away from the cities if their nests are demolished as soon as made, and if all the bird-houses are removed. A careful use of poison might also work with advantage, and in the large parks the shotgun in the hands of competent men could be brought into use.

I will add that if any of the readers of *Science* are troubled with the sparrow in ivy or other vines, by sprinkling red pepper among the leaves they will soon be rid of the pests. This has been tried with success.

RALPH S. TARR.

Washington, D.C., Dec. 4.

The results of shad propagation on the Atlantic coast.

In your issue of Nov. 13, p. 434, I see it stated by Colonel McDonald that the rivers draining into the Atlantic, from Cape Cod to the capes of the Chesapeake, together with the submerged continental border lying between the coast-line and the Gulf Stream, constitute an area "within the limits of which the migrations of the shad are confined."

Is this true? It certainly was not true sixteen years ago; for at that time, I am quite sure, shad were abundant in all the southern rivers. I well remember that they were especially abundant and fine in the Ogeechee, ten miles south of Savannah. I have not been in the southern states in shad season since 1869, and therefore cannot speak from personal observation since that time, but I have no doubt that the same is still true.

JOSEPH LECONTE.

Berkeley, Cal., Nov. 21.

Crystals in maple sirup.

I send you a photograph, kindly furnished by Mr. Arthur W. West, of some large crystals which formed on the inside of a glass jar of maple sirup. The sirup was made from the rock maple, *Acer saccharinum*, during March, 1885, by Elias Fogg, Esq., of Maple Ridge, Sandwich, N.H. As this is the first time that crystals have been noticed to form in the sirup by Mr. Fogg, or any one in Sandwich, I thought it worthy of notice. I would suggest as a theory to account for this crystallization that for the past two or three seasons there has been a considerable drought in that part of New England, and the maple-trees have therefore been less gorged with water than formerly, so that the sap is composed of a larger proportion of sugar as it comes direct from the trees. Mr. Fogg says that there has been no difference in the process of making the sirup, but that it keeps better, and is less liable to mould.

J. H. SEARS.

Salem, Mass.