with the other — various small articles of food, in one case a small frog;" and also, "I have often seen the crow hold a frog or acorn firmly, with one foot on the ground or on a fence-rail, while he pecked away with his bill." Similar instances I remember to have read about, and one in the Bulletin of the Nuttall ornithological club, where it is described as holding a small bird, which it had killed in an aviary, in its claws, while it tore it in pieces with its bill, like a bird of prey.

The claws of the shrikes, weaker than those of the crows, and quite as insessorial, are used to seize and carry prey. A few winters ago I saw a shrike killed on the Boston public garden by the city forester's men, which had in its claws, during its flight, a still living English sparrow. That the crows in the above-mentioned instances, though perching birds, do use their claws as prehensile organs, I regard as evidence of their intelligence and reasoning power, which enable them, under exceptional circumstances, to use their perching feet for raptorial purposes. We must not measure animal intelligence by our imperfect and arbitrary zoölogical classifications. Since the writings of F. Cuvier, Flourens, and Fée, it seems impossible to deny the possession of a reasoning intelligence to animals below man.

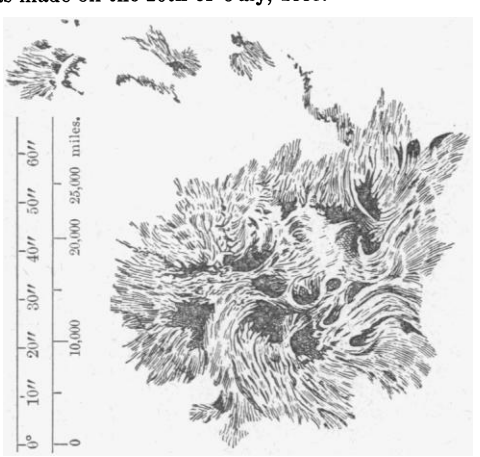
Leaving out of view the instance mentioned in no. 13, I think I have adduced sufficient evidence that the crows do *sometimes* — that is, when they find it necessary — seize and carry objects in their claws, like birds of prey. Samuel Kneeland.

An interesting sun-spot.

The accompanying sketch represents the remarkable sun-spot of July (which was visible to the naked eye), and is of particular interest. I did not see it in its early or formative period, when this was taken; but from my knowledge of Mr. Very's experience and skill I have no doubt of the trustworthiness of the drawing in all its details. His remarks supply all the further information needed. S. P. Langley.

Cambridge, Aug. 21, 1883.

I enclose a sketch of a large and unusually interesting sun-spot, as it appeared through the great equatorial of the Allegheny observatory, of 13 inches aperture, with the polarizing eye-piece. The drawing was made on the 26th of July, 1883.



The spot, while not so large as some, exhibited considerable activity and a remarkable assembly of odd forms, some of which appear so conflicting that it is difficult to imagine how they can exist side by side. The strong inrush from the following side gave one the idea of a viscid sheet or ribbon, rather than that of a bundle of filaments. It bore a striking resemblance to some of the forms which taffy assumes under the confectioner's manipulation. On the upper or northern side the filaments were more graceful, slender, and grass-like. The southern part was remarkable for the length and intensity of its curved filaments. (The longest could certainly be traced through more than 15,000 miles.) But perhaps the most curious portion was the centre, where a mass, possessed of photospheric brilliancy and fringed with curved and tangled threads, gave one the impression that a recently erupted facula, formed somehow in the very middle of the spot, was being torn to pieces by conflicting currents.

Numerous local whirls were evident, and the south-east half of the spot had a decidedly cyclonic appearance, the rotation being in an opposite direction to the hands of a watch. (It is to be remembered, that the drawing gives the appearance of a projection, and is therefore the reverse of a view by direct vision.) The north-west half of the spot did not show any such rotational tendency. F. W. Very.

Allegheny, Aug. 20, 1883.

The right whale of the North Atlantic.

I am sufficiently impressed by the utter absurdity of occupying your valuable pages in discussing non-essentials; yet I am called upon by your critic to clear up two points remaining, both of which in any case hardly deserve serious notice. I will endeavor to close this correspondence by stating the facts.

Referring to Scoresby's pictures of the Greenland whale, I was led to attribute to the first or earlier one another authorship, from seeing in it so much error and exaggeration; and this because I had just read in Scoresby's book the following (Arct. reg., vol. i. p. 447. 1820): "I have confined my engravings, as well as my descriptions, to those animals that have come immediately under my own examination, or have been sketched by persons on whose accuracy and faithfulness I could fully depend; while drawings that I have met with, when the least doubtful, have been altogether rejected."

His second figure being so nearly correct, having evidently been carefully drawn from an entirely different and natural study of the animal, it was easy to assume, that, having first taken at second-hand an ill-considered sketch, he promptly replaced it by a better one. In this view it should not be assumed that we had any thing but the kindliest motives in thus speaking of this most eminent and valued man's work. In Scoresby's 'Arctic regions' (ed. 1820) the second figure of the Greenland whale appears. The caudal region, including the flukes, is entirely redrawn, showing the various elements that make up the beauty of those parts, as the carinae, etc. The other features, unfortunately, are not improved; yet more unfortunate is the fact that the earlier figure, with all its imperfections, has come down to us in most of the more important works.

With reference to the corrections of Scoresby's figures, we may point to an old work in the library of the American museum, which, by the way, is not noticed in Mr. Allen's bibliography; namely, "Histoire des pêches, des découvertes et des établissemens des Hollandois dans les mers du Nord, etc. Par Le C. Bernard DeReste. Tome premier. A Paris, 1801." This is an octavo volume, devoted almost entirely to cetaceans, and has large copper-plate engravings, one of which contains a right whale labelled B. franche, and another the sperm whale.