and Ullman's hygrometer-would enable the farmer far better to anticipate the weather, than he could by any familiarity with the best barometer. The sudden fall of the mercury in the barometer will fortell wind or rain; but no one can tell which until he ascer-tains the hygrometric state of the air. If it be dry, wind will come ; if the atmosphere is damp, there will be rain. So the farmer noticing the mercury high in the thermometer, and turning to his hygrometer, perceives a large amount of aqueous vapor indicated, will know that rain is at hand ; while on the contrary, however hot the weather, if the air is dry, he will not look for rain. Mr. Ullman's little instrument requires no care or attention. Hang it up on a nail in a verandah or hall, and we believe it would run one hundred years with the greatest accuracy.

10. ANIMAL BAROMETERS.

The remarkable forecast manifested by birds and beasts of changes in the weather is familiar to all intelligent observers of their habits. This faculty seems to rise above instinct and to attain nearly to the quality of reasoning. It is a wonderful exercise of a beneficence of that Providence which does not allow the sparrow to go uncared for in preparing these helpless and dependent creatures for the changes and vicissitudes they must encounter. The fact is always recognized, but the agency by which this intelligence is imparted by the Creator is not so readily comprehended. The experience and observation of man furnish him with only vague and uncertain means of anticipating such changes, while the signs afforded by these humble creatures enable us to form opinions almost infallible. How do they possess or exert this attribute ? Immediately approaching changes from wet to dry, from hot to cold, or the reverses, may probably be indicated to the brute creation by atmospheric or electric influences upon their nervous system. This theory, however, will not account for the possession of this apparent intelligence of directly impending events, such as a storm of wind or rain, but does not explain the more surprising exercise of the faculty. Not only the beaver and other animals which we are in the habit of classing in the higher order of brute intelligence, but those of inferior instincts or sagacity, as the common muskrat and swine, indicate by their habits and arrangements the general character of the weather for an approaching We may judge very accurately by the indications they furseason. nish in autumn of what will be the prevailing weather of the coming winter. The squirrel seems to enjoy a foreknowledge, upon which he graduates the extent of his labours in garnering up the supplies for his winter quarters. The habit is, I believe, exhibited by every creature in a normal condition.

The question, by what instrumentality does Providence communicate this power to the brute creation, is of much interest, and worthy, I think, of philosophical investigation. My attention has been just now attracted to this subject by an exhibition of the organ in the hog known to farmers as the milt. As long as I can remember, I have known the size and form of this organ to be regarded as an index of the character of the ensuing winter. I received the idea from my father, who derived it during the last century from the Dutch burghers of Albany, but I find it now familiar to most farmers. My father observed this sign for fifty years, and he often remarked that it had never deceived him. It is certain, I believe, that the milt varies in its form and dimensions from year to year, and that there always prevails a singular uniformity in the appearance of this organ in all swine slaughtered the same season.

Assuming these facts to be determined, do they not afford some light towards the solution of the questions I have presented ? we not, by the data they present, detect a faint glimme, ing of the plan by which this special scheme of Divine wisdom and mercy is effected ? If the form of the hog's milt enables man to judge of the mildness or severity of a season, months in advance, does it not impart to the animal the same perception of the future ? This creates, perhaps, the instinct or faculty which often seems so marvelous. If this is true in respect to swine, the same cause may operate with similar results upon some organ in other animals and impress upon them this foreknowledge of the seasons. These organs, acting possibly upon the nervous system or brain, may stimulate faculties which enable the animal to know or feel how he shall prepare for his approaching wants, and produce those acts and habits from which man derives his auguries of the future.

These are crude speculations, but the thought and the facts de-serve consideration.—New York Observer.

11. METEOROLOGY FOR THE FARMERS.

Some time ago, when Lieutenant Maury was in England, he was consulted on behalf of the government there on the subject of giving, for the benefit of shipping, warning by telegraph of approaching storms. His opinion as to the importance and value of the magnetic | for a moment grievously, yet it is but a drop in the great aggregate

telegraph as a meteorological implement, which has for several years been so often expressed, was reiterated and a detailed account of the plan given in a letter addressed last December to the Royal commission ou Light Houses, &c., showing how, through them and the telegraph, timely warning might be given of many a storm. The plan is now in practice there : and on the 7th ult., the Admiral in charge of this new system of meteorology, telegraphed to the principal ports of the realm to look out for a storm on the 9th. And sure enough, those shores were on the 9th visited by one of the most furious destructive storms ever known.

These warnings are as important to the farmers, and indeed to all classes of citizens whose pursuits or avocations are at all affected by the weather, as they are to ships and seamen. We hope the farmers will take the matter up, and encourage this move; for by discussing it in their clubs, and before their Agricultural Societies, the plan will find such favor with the people as to ensure an order by the government for its adoption.

The following in commendation of it, is from a recent number of "The Scotsman," of Edinburgh :

CAPTAIN MAURY, OF THE WASHINGTON OBSERVATORY, ON THE PRE-DICTION OF STORMS ALONG OUR COASTS.

The lately appointed British Royal commission, to inquire into the whole subject of the purposes, uses, construction and management of lighthouses, has had a question before it which no previous Lighthouse Board, we believe, ever had, and which may fairly be taken as a sign of the progress of physical science in the age in which we live. The question stated formally is : "In the event of telegraph wires being laid down from the Board of Trade to each lighthouse, what sort of meteorological information should be transmitted for the purpose of being signaled to passing ships ?"

Answers to this question have been sought by the Commission from the most eminent men of science in this country; and not satisfied with such information as our own island could supply, they have sought advice and counsel from an eminent American, who has made the dangers of nautical life a subject of careful study. This gentleman, we need hardly say, is Capt. Maury, of the United States Navy, known in reading circles as the author of the "Physical Geography of the Sea," and known and honored in every sea that is sailed over by ships, either European or American, for his admirable "Wind and Current Charts"—charts which are founded on a comparison and systematic discussion of a larger number of nautical observations than, we may safely say, were ever before collected, compared and discussed by any man, living or dead.

The subject came before Captain Maury at a time when the critical condition of his country had claims upon his attention, which might have excused him had he postponed its consideration. no sooner did the communication of the British Royal Commission reach him, than he entered into the subject earnestly, and wrote out a copious and instructve reply, which we are unable to insert. But it may interest nautical readers to learn that he is anxious to see the plan adopted, of communicating the approach of storms by signals to ships from every lighthouse. He holds, that, though storms cannot be predicted in all cases, they may in many; and this by the estab-lishment of a central office to which meteorological observations should be transmitted by telegraph from a wide circle of surrounding stations, and compare together. He points out that, taking a general view of the world, the coasts of Britain are peculiarly dangerous, for they seldom fail to present a lee-shore to the sailor in any and every wind that blows.

On the other hand, the geographical position of these islands is such as would enable them to give early and valuable warnings to countries eastward, of western storms. Predictions of weather founded on observations at any one point would exhibit uncertainty and confusion, but when derived from observations at many and distant points, instantaneously communicated and combined, order and sequence appear, and the progressive march of special storms can be Hence a central meteorological office is in a vastly more favtraced. vorable position for judging of the weather than any single ship, though steered by a scientific commander, amply provided with bar-ometers and thermometers. To every ship, therefore, when it comes into the neighborhood of our iron-bound shores, after its solitary voyage through the watery waste, it would be one of the greatest boons conceivable if each lighthouse hung out a signal, intimating what Captain Maury well calls "the invisible dangers of the atmosphere," thereby indicating to the mariner from what quarter he may presently expect a storm to break forth, which coast will be dangerous, and which safe for him, to be found in the neighborhood of-

Had any such system been in operation when that magnificient Australian liner, the Royal Charter, with its hundreds of passengers, In sight of our shores, after this long voyage, with its precious freight from the other side of the world, the dire calamity which ensued could never have occurred. That and wreck shocked the public mind