tailed crab (*Nautilograpsus minutus*) swarms on the weed and on every floating object, and it is odd to see how the little creature usually corresponds in colour with whatever it may happen to inhabit. Mr. Murray, who has the general superintendence of our surface work, brings in curious stories of the habits of these little crabs. We observe that although every floating thing upon the surface is covered with them, they are rarely met swimming free, and that whenever they are dislodged and removed a little way from their resting place, they immediately make the most vigorous efforts to regain it. The other day he amused himself teasing a crab which had established itself on the crest of a *Physalia*. Again and again he picked it off and put it on the surface at some distance, but it always turned at once to the *Physalia* and struck out, and never rested until it had clambered up into its former quarters.

On Thursday, the 19th, we sounded in 2,750 fathoms in a grey mud containing many foraminifera. Position of the ship at noon, lat. 35° 29′ N., long. 50° 53′ W.

The wind now gradually freshened, and for the next three days we went on our course with a fine breeze, force from 4 to 7, from the southward, sounding daily at a depth of about 2,700 fathoms, with a bottom of reddish grey ooze. On Tuesday the 24th the trawl was put over in 2,175 fathoms, lat. 38° 3′ N., long. 39° 19′ W., about 500 miles from the Açores. As in most of the deep trawls on grey mud, a number of the zoœcia of delicate branching polyzoa were entangled in the net. One of these on this occasion was very remarkable from the extreme length (4 to 5 mm.) of the pedicels on which its avicularia were placed. Another very elegant species was distinguished by the peculiar sculpture of the cells, reminding one of those of some of the more highly ornamented *Lepraliæ*. WYVILLE THOMSON

(*To be continued.*)

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE second session of the French Association was opened at Lyons last Thursday, by an inaugural address from the President, M. de Quatrefages, who pointed out the almost inconceivable advance of Science during the past century, and the importance of Science in education.

In speaking of scientific education, the President said that the devotees of literature accused Science of stifling sentiment and imagination; she kills, say they, the ideal and stunts intelligence by imprisoning it within the limits of reality; she is incompatible with poetry. The men who speak thus have never read Kepler the astronomer, Pascal the geometer, Linnæus the naturalist, Buffon the zoologist, Humboldt the universal *savant*. What! says the President, Science stifle sentiment, imagination, she who brings us every hour into the presence of wonders! She lower intelligence, who touches on all the infinities! When *littérateurs* and poets know Science better, they will come and draw from her living fountain. Like Byron of our time, like Homer of yore, they will borrow from her striking imagery, descriptions whose grandeur will be doubled by their truth. Homer was a *savant* for his time. He knew the geography, the anatomy of his era; we find in his verses the names of islands and capes, technical terms like *clavicle* and *scapula*. None the less he wrote the Iliad.

No, the study of Science will never suppress the genius of an inspired poet, of a true painter, of a great sculptor. But she will bring more light to the path of an erring soul. She will perhaps transform into a wise man, or at least into a citizen useful to himself and others, one who without her would only have been one of those pretended incomprehensible geniuses, destined to perish of misery, of impotency, and of pride. While fully admitting the important place of literature in education, he would wish to see children initiated at an early age into the facts, the ideas, the methods of Science.

Governments, such as they have hitherto been, have almost always acted as if they had no need for the men who study Nature and her forces. But when any critical or important event occurs, then it is found necessary to appeal to them. Of whom are the juries of International Exhibitions composed? No doubt each State sends its worthy merchants, its tried chiefs of industry, its eminent agriculturists, but it also, and above all, sends its men of science. At these important times peoples are comparing their real strength, and each feels that it is for its honour in the present and its prospects in the future that the truth should appear; and to enlighten them, whether it be concerning cannons or silk-manufactures, telescopes or crystals, jewellery or hardware, it is felt that Science is indispensable, and men of science are appealed to.

But once the Exposition is closed, the State leaves the men of science to return to their studies. I wish, said M. de Quatrefages, it kept them in the service of their country. These men whom we ask to understand and judge of wonders would certainly be able to show how to produce them. When Science is everywhere, it would certainly not be useless to Government to have it in their power to be enlightened at any time on scientific questions. Although less pressing, less imperious than in the days of peril, the wants of agriculture, of industry, of commerce, like those of the army and navy, do not change their nature. Why wait the necessity for appealing to the *savants?*

A day will come when every great Administration will have its Consulting Committee, composed almost exclusively of men of science, and then many mistakes will be avoided, and many forces utilised which are at present lost. But in order that such an institution should be born and developed, it is necessary that the function of Science be universally comprehended and accepted. To attain this result is one of the chief aims of the French Association.

CHRISTOPHER HANSTEEN

ON the 11th of April last, Hansteen died at Christiania at the advanced age of 88, having been born on the 26th September, 1784. On leaving the cathedral school of Christiania, where he received his early education, he entered the University of Copenhagen in 1802, as a student of law, which, however, he soon abandoned for the more congenial study of mathematics. In 1806, he began his work as a public instructor in the capacity of mathematical tutor in the gymnasium of Fredricksburg, in the island of Zealand, and there he began also his life work as an original investigator by instituting researches into terrestrial magnetism. He first acquired distinction by taking the prize which had been offered for the best essay on this subject, by the Royal Society of Science of Copenhagen; and shortly thereafter, viz. in 1814, was appointed to the chair of Astronomy in the University of Christiania, which had been recently founded by Frederick VI. of Norway.

His great work, entitled "Untersuchungen über den Magnetismus der Erde," was published in 1819, at the expense of the King. This work was illustrated with an Atlas of Maps, and was the most satisfactory collection of observations on the variations of the needle, and was besides distinguished for its broad philosophical generalisations. In the further prosecution of his physical researches, he made his well-known journey into Siberia as far as Kiachta and Irkutsk, accompanied by Erman and Due, the expenses of this journey being liberally defrayed by the Norwegian Government. The establish-