

NOTES.

The latest submarine explorations made on board "Le Travailleur" have brought to light an extremely curious fact, which none of the scientists, who have hitherto endeavored to guess what might be the nature of life in the sombre depths of the ocean, have ever thought of. These abysses are not only peopled by foraminifera and infusoria, as has been supposed but numerous species of fish analogous to those which inhabit the surface of the water are there found, possessing very curious anatomical peculiarities and novel organs. These organs are transparent plates covered by the skin and filled with a liquid capable of becoming luminous under the influence of the encephalon. It hence results that these vertebrata, which inhabit regions where the sun never penetrates, and where, consequently, eternal darkness reigns, possess a kind of dark-lantern which they can light at will. It should be added that one peculiarity has long been taken cognizance of, which is that a majority of the zoophytes which carpet the bottom of the sea are naturally phosphorescent.—*Ex.*

News from Mr. Stanley, dating to the middle of December, states that he has started for Vivi, the first of seven stations established by the International African Society. At Vivi preparations are making for the construction of a railway line to the landing place on the river. Bolobo, the last station established, is seven hundred miles from the mouth of the Congo. The seven stations already seem to have become centres of civilization, and are making their influence felt upon the surrounding tribes. Cattle have been introduced at Vivi, cabbage and lettuce are thriving at Leopoldville, and three small steamers are launched. Fears are entertained lest through the claims of the Portuguese government obstructions to the freedom of way and commerce may arise. Several Swedish officers have recently left Europe to join Mr. Stanley.—*American Naturalist.*

Prof. Palmieri announces the existence in the lava of Vesuvius of a substance giving the spectrum line of "helium," an element hitherto recognised only in the sun.

A man who weighs 150 pounds on the earth, if transported to Jupiter, would shake the ground with a ponderous tread of 45,000 pounds, or twenty-two and a half tons! A hickory-nut falling from a bough would crash through him like a Minie ball. Water would weigh fifteen times as much as quicksilver. A moderate wave would sliver to atoms the strongest iron-clad.

The motive of science was the extension of man on all sides into nature, until his hands should touch the stars, his eyes see through the earth, his ears understand the language of beast and bird and the sense of the wind; and through his sympathy heaven and earth should talk with him.—*Emerson.*

The pearl fisheries of La Paz, Lower California, have been very productive the past season: one pearl found last season weighed 75 carats and sold on the spot for \$14,000. A second one which weighed 47 carats is valued at \$5,000.

So far from science being irreligious, as many think, it is the neglect of science that is irreligious—it is the refusal to study the surrounding creation that is irreligious.—*Herbert Spencer.*

A New Method of Finding the Mean Density of the Earth.

A new and ingenious method of determining the mean density of the earth has been devised and applied by Professor Von Jolly, of Munich. On the top of the tower seventy-three feet high was placed a pair of scales, to each plate of the instrument a wire was attached, which passing through a zinc tube, reached within less than four feet of the earth. To the lower end of each wire an another plate was attached, and under one of these was placed a globe of lead one metre in diameter. Bodies placed first in the upper scales, and then in the lower, had a measurably greater weight in the latter. Again, bodies weighed more or less in the lower scale, according as the leaden globe was present or absent. The difference of these weights furnished the data for determining the ratio of the earth's density to that of lead. Mr. Von Jolly's experiment gave a mean density of 5.692, the density of water being unity. This slightly exceeds the value obtained by Mr. Bailey.—*International Journal.*