

this power, sufficient to cause any general illumination, or powerful enough to have influenced, over the whole ocean, the evolution of complex eyes, brilliant and complex protective colors, and complex commensal adaptations.

It seems to me probable that more or less sunlight does actually penetrate to the greatest depths of the ocean in the form of a soft sea-green light, perhaps at two thousand to three thousand fathoms equal in intensity to our partially moonlight nights, and possibly at the greatest depths equal only to starlight. It must be remembered that in the deep sea, far from land, the water is far more transparent than near the coast. A. E. VERRILL.

ALPHONSE LAVALLÉE.

DENDROLOGICAL science has met with a great, an almost irreparable loss, in the death of Alphonse Lavallée, the best-known and most successful student and collector of trees of this generation. Twenty-five years ago, under the advice and inspiration of Decaisne, he commenced to gather upon his estate at Segrez, near Paris, the collection of trees and shrubs which has since developed into the richest and most complete arboretum ever established.

Mr. Lavallée did not confine himself merely to the collection and cultivation of trees: he studied them thoroughly and critically, publishing from time to time the results of his investigations.

The nomenclature and synonymy of the forms and varieties of many genera of trees cultivated in the different countries of Europe, long ago fell into an almost hopeless confusion; and, to bring some order out of this confusion, Mr. Lavallée set himself resolutely to work. The results of these investigations were published, ten years ago, in the catalogue of his collections. A second and greatly enlarged edition of this useful work, written with a riper judgment and fuller knowledge, in many critical questions of synonymy, was nearly ready for the printer at the time of Mr. Lavallée's death. He had commenced, too, the publication of the *Arboretum Segrezianum*, of which, however, only five parts had appeared. This sumptuous work, superbly illustrated with figures engraved from steel, contained the descriptions and history of some of the rarest or least-known plants of Mr. Lavallée's collections. His latest published work, a magnificently illustrated folio in which are described *Les clématites à grandes fleurs*, has only just

reached the author's correspondents in this country. This was to be followed, in the course of the year, by an illustrated monograph of the genus *Crataegus*, which has long occupied Mr. Lavallée's attention. His collection of different forms of the species of this most difficult and perplexing genus was unsurpassed, and his opportunities for observing them in a living state unequalled; so that a valuable revision of this genus might have been looked for from his pen.

Mr. Lavallée, at the time of his death, was president of the Central horticultural society of France, and perpetual treasurer of the National agricultural society, and had just declined the professorship in the Museum d'histoire naturelle, lately made vacant by the death of his old master, Decaisne. He had been in ill health for several months, but his death was entirely unexpected. It was caused by aneurism, and occurred at Segrez upon the 3d of May, only a few hours after his return from a long residence in the south of France. Mr. Lavallée was only forty-nine years old at the time of his death. C. S. S.

BURIAL-MASKS OF THE ANCIENT PERUVIANS.

A RECENT contribution to the Bureau of ethnology illustrates one of the most curious of ancient burial customs. It is almost a universal practice with primitive peoples to deposit articles of value with the dead. The ancient Peruvians were most lavish in this respect. Food, raiment, implements, utensils, rich tapestries, and precious articles of silver and gold, as well as objects of superstitious regard, were freely sacrificed.

Most interesting of all these offerings were the mask-like heads generally placed within the outer wrappings upon the top of the mummy pack. At Ancon these objects were usually made of cotton cloth. A small square sack or pillow was made, and stuffed with leaves or seaweed. One side was painted to represent the human face, and to this a wooden nose was stitched. Hair was attached to the back of the head, and a more or less elaborate head-dress was placed upon the crown.

The specimen referred to is of this class. It was obtained from a grave in the vicinity of Lima, and purchased by G. H. Hurlbut of Chicago. It differs greatly from Ancon specimens, but is somewhat similar to an example illustrated by Squier, also from the vicinity of Lima. It is interesting chiefly on account of the heter-