(s. *Mongold,* 1910, p. 245) also described luminosity in sponges. Dahlgren (*J. Franklin Inst.,* 1916, p. 243) examined luminous sponges at Naples and proved that the worms and protozoa living in their canals were the actual source of the light. The matter is, however, different in *Grantia* sp. as observed by Harvey (*Biol. Bull.,* 1921, p. 286) at Friday Harbor. According to this author the sponge produces a good luminescence in the dark and gives a luminous slime when squeezed. The organisms living in its canals are not luminous. Harvey is of the opinion that the light of this species of sponge is an autogenous luminescence. Thus, there is uncertainty and diversity of statement as to the fact and the probable source of the luminosity in sponges, and we lack careful observation and study affording either positive or negative evidence on the subject.

In the evening of August 25, 1919, the writer, while engaged in examining the dredgings from the bottom of the Sagami Sea at a depth of about one thousand meters, observed a large specimen of *Crateromorpha meyeri* Gray to be brightly luminous. The whole body of the sponge glowed for several hours after being brought into a dark room. The luminescence consisted of a thousand spots of a blue light resembling the stars in the sky. On dipping the sponge into fresh water the light shone particularly brightly, but at the same time the luminous spots were observed to be transferred from the body of the sponge into the surrounding medium. Each spot proved to be a small annelid belonging to the family *Alciopinae.* More closely examined, the sponge itself showed numerous individuals of this same annelid filling the entire canal system. After the annelids were entirely removed the sponge gave no more light, while the removed organisms themselves glowed momentarily on stimulation. The light of *Crateromorpha* is apparently a secondary luminescence.

Whether or not other luminous sponges are analogous to this is an open question, but it is a usual feature that annelids and other small organisms live in their canals. I am inclined to believe that sponges do not produce autogenous luminescence.

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THE FAMILY CLIONIDAE

THE name Clionidae was adopted by Topsent in 1887 for a family of sponges which bore into the shells of molluscs. The type genus was *Cliona* of Grant. However, the name Clionidae (Gray, 1840) has long been in general use for a family of Pteropod molluscs, with *Clione* Pallas as the type genus. The sponge family may be called Thoosidæ, from *Thoosa* Hancock, the next oldest genus.

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SCIENTIFIC BOOKS

SOME NEW BOOKS ON GENETICS

Genetics in Plant and Animal Improvement. By D. F. JONES. viii + 568 pp., 229 figures. John Wiley & Sons, N. Y. Price $4.00. 1925.

Principles of Genetics, an Elementary Text with Problems. By E. W. SINNOTT and L. C. DUNN. xviii + 431 pp., 140 figures. McGraw-Hill Book Co., N. Y. Price $3.50. 1925.

Animal Genetics, an Introduction to the Science of Animal Breeding. By F. A. E. CREW. xx + 420 pp., 67 figures. Oliver and Boyd, Edinburgh. Price 15/— 1925.

THREE new text-books on genetics have recently been published. There was no dearth of texts before. Apart from the pioneer and standard books by Bateson and Punnett in England, followed by those of Lock, Doncaster and Darbishire and the German texts by Baur, Goldschmidt and Johannsen, there had been published in America alone books by Babcock and Clausen, Castle, Conklin, Coulter, Morgan and Walter, besides several texts dealing primarily with eugenics. It would seem to be a bold author who would seek to extend the list. Yet at the present time genetics is of such general interest in biology that a variety of treatments of the subject is required to meet all needs, and our knowledge of genetics has been increasing so rapidly that no text remains up-to-date unless it is frequently revised or rewritten. In this state of affairs a fresh and original treatment of the topic is welcome and any new contribution to the only-partly-solved problem of how successfully to teach genetics is thrice welcome.

Jones has produced one of the best text-books on genetics that has yet appeared. He approaches the subject from the viewpoint of one interested in the increase of the world's food supply consisting of plant and animal products. He recognizes that the area available for agriculture is already largely occupied and can not be extended much further. It is therefore incumbent on the farmer to utilize to its fullest capacity the agricultural land now available. This can be done in part by better methods of farming and by improved machinery. It is possible also to discover or produce better varieties of cultivated plants and of domestic animals than those now in use. This last can be done best by an intelligent use of the principles of genetics. Those principles Jones proceeds to develop in an orderly way, beginning with the simplest case of Mendelian heredity and proceeding by gradual steps to more complicated and debatable cases, not however giving the reader occasion to doubt for a moment the complete adequacy of Mendelism to explain all cases. One wishes at times that Jones were less of a "fundamentalist" in his devotion to Mendelism; perhaps a dash of scepticism as to some