kinds of ammonites are known in the secondary formations, certain forms being restricted to particular rocks. Thus, for example, the chalk marl of Sussex abounds in two species, (Tab. 53, figs. 7, 9,) which either are very rare, or do not occur in the white chalk above, or in the galt below; and in every locality of the marl in England, and on the continent, these species are found. But I must again refer you to Dr. Buckland's Bridgewater Essay for much important and interesting information on these subjects. I will add but one remark; the membranous tube of the siphuncle sometimes occurs in a fossil state; as may be seen in this ammonite from the chalk-marl near Lewes, which retains a large portion of the siphuncle; the black substance of these tubes has been analysed, and found to consist of animal membrane, permeated by carbonate of lime. Dr. Prout is of opinion that the black colour has originated from decomposition; the oxygen and hydrogen of the animal membrane having escaped, and carbon been evolved, as happens when vegetable matter is converted into coal, under the process of mineralization. The lime has taken the place of the oxygen and hydrogen, which existed in the pipe before decomposition.*

Ammonites vary in size from a few lines to twelve or fourteen feet in circumference; at low water on those parts of the Sussex coast where the chalk forms the base of the shore, enormous specimens

* Bridgewater Essay, p. 352.