This case of Medusæ with different numbers of rays is precisely parallel to the case of Star-fishes with a variable number of rays, such as have been described by the older Linck, who, unfortunately for himself and the progress of science, considered each variation, in this respect, as indicating generic distinctions; when he might easily have ascertained that several species vary greatly in this respect.

Since the genus Sarsia was first characterized by Lesson, several species have been added to it by Forbes, Busch, and McCrady; but I do not believe that these all belong to the genus Sarsia, and not even to the same family. The proliferous species described by Forbes and Busch, and the Sarsia turricula *McCr.*, resemble much more the free medusæ of certain Tubulariæ described in the sequel, than the true Sarsiæ arising from Syncoryne, and must, therefore, be referred to that family, to which, as we shall hereafter see, the genera Steenstrupia and Euphyra also belong. Oceania thelostyla *Gegenb.*, on the other hand, belongs to a distinct genus, lately characterized from a species discovered by my son on the coast of Massachusetts. This genus is closely allied to Sarsia, both in its hydroid and medusoid generation. Thus far it might have appeared that the genus Sarsia was confined to the two sides of the Atlantic Ocean, within the limits of the northern temperate zone; but, during his residence upon the Pacific coast of North America, my son has observed a genuine Sarsia, closely allied to the European S. tubulosa, the development of which, from a Syncoryne, he has also traced. This fact is of the highest importance, as showing that Medusæ which are generically identical, arise from Hydroids bearing identical generic relations.