The second legion of Spongiæ contains the Fibrous Sponges (Fibrospongiæ), the soft body of which is supported by a firm, fibrous skeleton. This fibrous skeleton often consists merely of so-called "horny fibres," formed of a very elastic, not readily destructible, organic substance. This is the case for instance in our common bathing Sponge (Euspongia officinalis), the purified skeleton of which we use every morning when washing. Blended with the horny, fibrous skeleton of many of these Sponges, there are numerous flinty spicula; this is the case for example with the fresh-water Sponge (Spongilla). In others the whole skeleton consists of only calcareous or silicious spicula which are frequently interwoven into an extremely beautiful lattice-work, as in the celebrated Venus' Flower Basket (Euplectella). Three orders of fibrous sponges may be distinguished according to the different formation of the spicula, namely, Chalynthina, Geodina, and Hexactinella. The natural history of the fibrous sponges is of especial interest to the Theory of Descent, as was first shown by Oscar Schmidt, the greatest authority on this group of animals. In no other group, perhaps, can the unlimited pliability of the specific form, and its relation to Adaptation and Inheritance, be so clearly followed step by step; perhaps in no other group is the species so difficult to limit and define.

This proposition, which applies to the great legion of the Fibrous Sponges, applies in a still higher degree to the smaller but exceedingly interesting legion of the calcareous sponges (Calcispongiæ), on which in 1872, after five years' careful examination, I published a comprehensive Monograph. The sixty plates of figures accompanying this Monograph explain the extreme pliability of these small sponges