

THE PHYLOGENY OF THE SOUL

no specific nervous system, while their nearest relatives, the turbellaria, have already differentiated one, and even developed a vertical brain.

The *sponges* form a peculiar group in the animal world, which differs widely in organization from all the other metazoa. The innumerable kinds of sponges grow, as a rule, at the bottom of the sea. The simplest form of sponge, the *olyntus*, is in reality nothing more than a *gastræa*, the body-wall of which is perforated like a sieve, with fine pores, in order to permit the entrance of the nourishing stream of water. In the majority of sponges—even in the most familiar one, the bath-sponge—the bulbous organism constructs a kind of stem or tree, which is made up of thousands of these gastræads, and permeated by a nutritive system of canals. Sensation and movement are only developed in the faintest degree in the sponges; they have no nerves, muscles, or organs of sense. It was therefore quite natural that such stationary, shapeless, insensitive animals should have been commonly taken to be plants in earlier years. Their psychic life—for which no special organs have been differentiated—is far inferior to that of the *mi-mosa* and other sensitive plants.

The soul of the cnidaria is of the utmost importance in comparative and phylogenetic psychology; for in this numerous group of the cœlenterates the historical evolution of the *nerve-soul* out of the *tissue-soul* is repeated before our eyes. To this group belong the innumerable classes of stationary polyps and corals, and of swimming medusæ and siphonophora. As the common ancestor of all the cnidaria we can safely assign a very simple polyp, which is substantially the same in structure as the common, still surviving, fresh-water polyp—the *hydra*. Yet the *hydræ*, and the stationary, closely re-