

## THE RIDDLE OF THE UNIVERSE

tunicate does not articulate, or form members, and has a very simple organization (most of them subsequently attach themselves to the bottom of the sea and degenerate). The vertebrate, on the other hand, is characterized by an early development of internal members, and the formation of pro-vertebræ (*vertebratio*). This prepares the way for the much higher development of their organism, which finally attains perfection in man. This is easily seen in the finer structure of his spinal cord, and in the development of a number of segmental pairs of nerves, the spinal nerves, which proceed to the various parts of the body.

The long ancestral history of our "vertebrate soul" commences with the formation of the most rudimentary spinal cord in the earliest acrania; slowly and gradually, through a period of many millions of years, it conducts to that marvellous structure of the human brain which seems to entitle the highest primate form to quite an exceptional position in nature. Since a clear conception of this slow and steady progress of our phyletic psychogeny is indispensable for a true psychology, we must divide that vast period into a number of stages or sections: in each of them the perfecting of the structure of the nervous centre has been accompanied by a corresponding evolution of its function, the *psyche*. I distinguish eight of these periods in the phylogeny of the spinal cord, which are characterized by eight different groups of vertebrates: (1) the acrania; (2) the cyclostomata; (3) the fishes; (4) the amphibia; (5) the implacental mammals (monotremes and marsupials); (6) the earlier placental mammals, especially the prosimiæ; (7) the younger primates, the simiæ; and (8) the anthropoid apes and man.

I. First stage—the *acrania*: their only modern