

retains them all its life, like all other Sozobranchiata. This gilled salamander generally remains in the water, with its aquatic organs of respiration, and also propagates itself there. But in the Paris garden, unexpectedly from among hundreds of these animals, a small number crept out of the water on to the dry land, lost their gills, and changed themselves into gill-less salamanders, which cannot be distinguished from a North-American genus of tritons (*Amblystoma*), and breathe only through lungs. In this exceedingly curious case we can directly follow the great stride from water-breathing to air-breathing animals, a stride which can indeed be observed every spring in the individual history of development of frogs and salamanders. Just as every separate frog and every separate salamander transforms itself from an amphibious animal breathing through gills, at a later period into one breathing through lungs, so the whole group of frogs and salamanders have arisen from animals breathing through gills, and akin to the Siredon. The Sozobranchiata have remained up to the present day in that low stage of development. Ontogeny here explains phylogeny; the history of the development of individuals explains that of the whole group (p. 10).

The important variations of organizations which have recently been very thoroughly and clearly explained by Wilhelm Roux as *Functional Adaptations* stand in direct connection with the phenomena of Cumulative Adaptation, and partly under the same idea. Roux's treatise on "The Struggle of the Parts of Organisms" (1881) is one of the most important of the recent contributions to our Darwinian literature. In agreement with Lamarck, Roux starts with the morphological actions of the physiological functions or