

system of operations for giving them this extraordinary density, which no gradual consolidation could have imparted. The formation of the teeth is, in some respects, analogous to that of shell; inasmuch as all their parts, when once deposited, remain as permanent structures, hardly ever admitting of removal or of renewal by the vital powers. Unlike the bones, which contain within their solid substance vessels of different kinds, by which they are nourished, modified, and occasionally removed, the closeness of the texture of the teeth is such as to exclude all vessels whatsoever. This circumstance renders it necessary that they should originally be formed of the exact size and shape which they are ever after to possess: accordingly, the foundation of the teeth, in the young animal, are laid at a very early period of its evolution, and considerable progress has been made in their growth even prior to birth, and long before they can come into use.

A tooth of the simplest construction is formed from blood-vessels, which ramify through small masses of a gelatinous appearance; and each of these pulpy masses is itself enclosed in a delicate transparent vesicle, within which it grows till it has acquired the exact size and shape of the future tooth. Each vascular pulp is farther protected by an investing membrane of greater strength, termed its *capsule*, which is lodged in a small cavity between the two bony plates of the jaw. The vessels of the pulp begin at an early period to deposite the calcareous substance, which is to compose the ivory, at the most prominent points of that part of the vesicle, which corresponds in situation to the outer layer of the crown of the tooth. The thin scales of ivory thus formed increase by farther depositions made on their surfaces next to the pulp, till the whole has formed the first, or outer layer of ivory: in the mean time, the inner surface of the capsule, which is in immediate contact with this layer, secretes the substance that is to compose the enamel, and deposites it in layers on the surface of the ivory. This double operation proceeds step by step, fresh layers of ivory being