dentine radiate. The differences observable in the size, mode of ramification, and distribution of the medullary cavities or canals, and the *calcigerous tubes*,* as revealed by microscopic exploration, constitute important distinctive characters; particularly in the examination of the fossil teeth of extinct fishes. Plate VI. figs. 1, 2, represent the structure of the teeth of two common fossil species of the Shark family, from the Chalk. In some teeth the dentine is traversed by equidistant, parallel, medullary canals; in others, these channels frequently subdivide, and their branches anastomose with each other. In some the medullary canals form a reticulated, or net-like structure in the dentine, the meshes of which are occupied by calcigerous tubes, and cells; often producing a dendritical appearance, as in the tooth of a fossil fish named *Dendrodus* (by Prof. Owen), a portion of which is represented in Plate VI. fig. 8. "In the highest type of structure, the dentine consists of a simple medullary cavity or canal, and a single system of calcigerous tubes, which radiate from the central or sub-central pulp-cavity, at right angles to the periphery of the tooth,"† as in the teeth of the extinct Sauroid (*lizard-like*) fishes. A continued succession of

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* *Calcigerous tubes*; so named because they are composed of *calx*, or lime.

† See ODONTOGRAPHY, p. 10. *et seq.* for a full elucidation of the structure of the teeth of fishes.