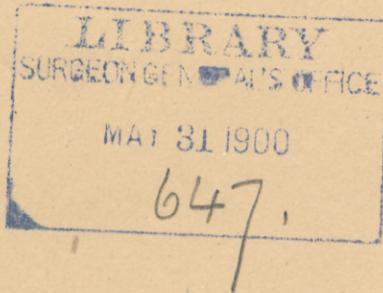


MILLER (W.D.)

Microscopic examination of
a case of Caries of a Monkey's tooth



MICROSCOPIC EXAMINATION OF A CASE OF CARIES OF A MONKEY'S TOOTH.

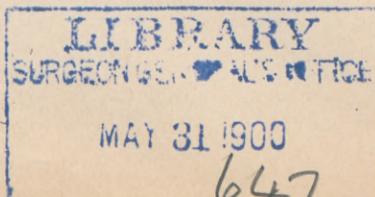
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It is well known that the Quadrumana are not exempt from decay of the teeth. Particularly in captivity they are by no means infrequently subject to this disease. I doubt, however, if many are aware of the terrible havoc sometimes wrought upon the teeth of these animals by decay; nor has, to my knowledge, a microscopic examination of the decayed tissue ever been made.

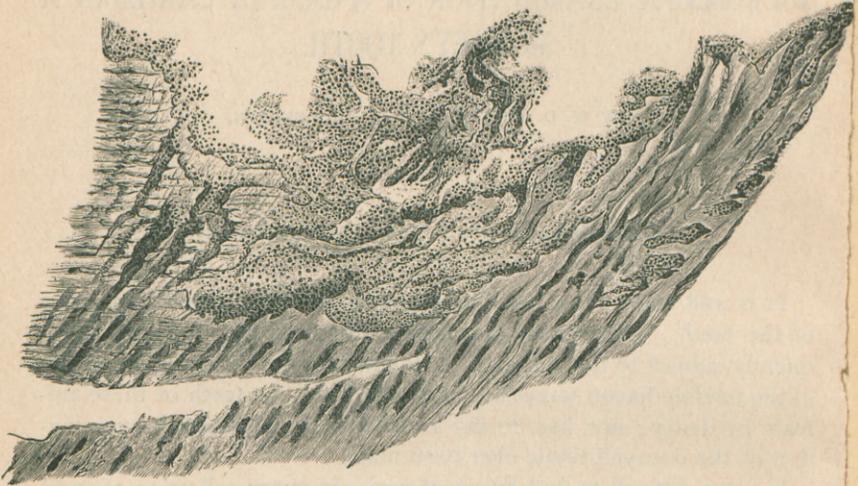
It is not difficult to find traces of caries in every collection of apes' or monkeys' skulls, but some of the most pronounced cases I have ever seen are in the possession of Dr. Barrett, of Buffalo,—among others, the skull of a monkey from the London Zoological Garden, in which every single tooth with the exception of the lower incisors is decayed. The right superior central incisor is decayed to the pulp, and one-third its length broken off; the left superior incisor is a complete ruin, and shows evidences of alveolar abscess. Other skulls show ravages quite comparable to the worst cases of decay seen in human dentures, complicated with diseases of the alveolar process, abscess, necrosis, antral troubles, etc.

I have in my possession the skull of a monkey, which was presented to me by a former pupil, Zahnarzt Sietas. The twenty-seven teeth now present show fourteen cavities of decay. Particularly the masticating and buccal surfaces of the molars are attacked; also the approximal surfaces of the incisors, the lower centrals being decayed on both approximal surfaces. I obtained material for microscopic examination from one of the molars by placing it for twenty-four hours in water to soften up the dry tissue. I was then able to scoop out a piece of the decayed dentine with a spoon-shaped excavator. This was at once cut on the freezing microtome, and stained by the



Günther modification of the Gramm method. A section under a power of about 500 diameters is reproduced in the accompanying figure.

It will be seen that the same appearances repeat themselves here that have been found in human teeth, both living and dead, in caries of horses' and dogs' teeth, etc. In the deeper parts we find the



CARIOUS DENTINE FROM A MONKEY'S TOOTH. Circa 500: 1.

tubules crowded with bacteria and much distended; nearer the surface the basis-substance is broken down, the tubules melted together, and the whole mass of the tissue in a state of dissolution. In the case before us the destruction has been effected chiefly by micrococci; only at isolated points a few bacilli may be found by careful examination under the microscope.

