

## ON THE PRESENCE OF A SARCOSPORIDIUM IN THE THIGH MUSCLES OF MACACUS RHESUS.

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As far as can be ascertained this sporozoon has not been described before as occurring in a monkey, though several cases have been recorded in man<sup>1</sup> and in a number of other mammals.

Unfortunately the monkey was incinerated prior to the discovery of the parasite in the reserved piece of muscle in which it was found, nothing further can therefore be said about the distribution of the parasite in this animal. The features of the sarcosporidium found in the rhesus conform in the main with the known characteristics of this order of sporozoa, whose habitat, with rare exceptions, is the striped muscles of warm-blooded vertebrates. The microphotographs give a fair idea of the appearance of the trophozoite in the intramuscular stage of the parasite.

Photomicrograph No. 1, Plate XII, shows a transverse section ( $\times 500$  diameters) of an affected muscle fibre. It shows a capsule consisting of two coats, an outer dense clear sheath, traversed by fine striae, possibly fine canalicules through which nourishment passes from the surrounding lymph spaces to the parasite. These striae are arranged vertically to the surface of the parasite. The inner coat consists of a thin homogeneous membrane, which is not continued internally, however, into the protoplasmic body of the trophozoite. As will be seen from the illustration, the endoplasm consists of minute irregularly circular naked spores packed very closely together. There are no pansporoblasts or alveolar

<sup>1</sup> Smith, T. (1904). *Journal of Exp. Medicine*, vi, pp. 1—21, pls. i—iv. Vuillémin, P. (1902). *C. R. Ac. Sci. Paris*, cxxxiv. p. 1152.

meshwork separating these. The spores appear to be *ab initio* of one kind only, and of the nature of naked gymnosporos. If a spore is critically examined, beyond a central clear space, which may be a nucleus, no cell membrane or other structure can be made out. Judging from such appearances as are present, it seems likely that the spores multiply by simple division, and that the clear space seen in some of the spores is the commencement of such division.

Photomicrograph No. 2 represents a longitudinal section ( $\times 100$  diameters), it shows the great distension of the muscle fibre by the parasite. The poles of the trophozoite show no differentiation from the body, so that these regions cannot be looked upon as centres of proliferation. It will be further noticed that the affected fibres are not surrounded by any inflammatory small cells, which may in some measure serve to explain the absence of symptoms in the sarcosporidiasis of some animals.

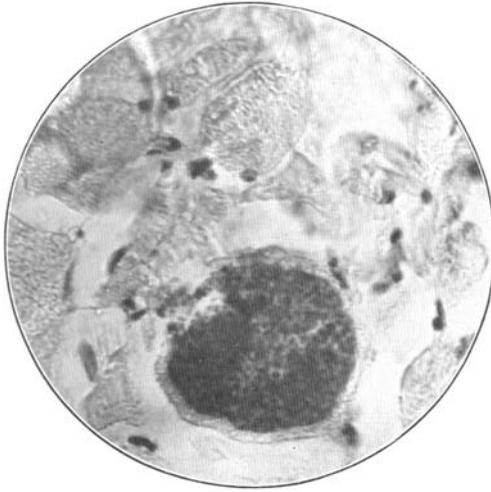


Fig. 1.



Fig. 2.