

The Life Cycle of the Rare Human Tapeworm, *Taenia Confusa*
Ward, 1896.

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In March, 1929, there was referred to the writer for diagnosis a complete strobila of an unarmed tapeworm, passed by a native white woman from St. John Parish, Louisiana, after administration of oleoresin of male fern. The worm grossly resembled *Taenia saginata*, but differed in several specific characters, including a more distinctly oval scolex, a pair of lateral elytra along the unsegmented region behind the scolex, longer and narrower terminal proglottids, and more clumped, less discrete branches of the uterus in these proglottids. In view of the fact that only 3 cases of this infection were on record (Nebraska, 2, Ward,¹ Guyer,² Texas, 1, Chandler³) and that this specimen was the first one to be diagnosed in the unpreserved condition, it seemed desirable to attempt to determine by experimental feeding what animal served as larval host. Information elicited from the patient indicated that she occasionally ate pork, rabbit bits and deer meat, and that she was fond of raw beef.

A 2-weeks old suckling calf and a rabbit were therefore secured and were each fed macerated terminal proglottids (*e. g.*, gravid segments) of the tapeworm. After a period of 3 months, during which time the animals were kept under rigid supervision, they were autopsied. The rabbit was found to contain 3 specimens of an armed cysticercus, *C. pisiformis*, a natural infection of rabbits, while the calf was infested with more than a thousand cysticerci, which had unarmed scolices, and which were considerably smaller than those of *Taenia saginata*. The extremely heavy infestation of the calf under circumstances that practically precluded a natural infection with larvae of *T. saginata*, together with the smaller size of the cysticerci recovered, has practically established the fact that these larvae were the resultant growth from the eggs which had been fed 3 months previously. Evidence therefore favors the view that the ox is an acceptable larval host and probably the normal one of *Taenia confusa*, and that the rabbit is not an appropriate larval host of this worm.

¹ Ward, H. B., *Western Med. Rev.*, 1896, i, 35-36.

² Guyer, M. F., *Zool. Jahrb.*, 1898, xi, 469.

³ Chandler, A. C., *J. Parasitol.*, 1920, vii, 34.

Examination of these cysticerici proved that they were fully mature. Experimental human infection did not seem desirable or necessary, but several of the larva were fed to each of 2 laboratory monkeys. More than 3 months later the monkeys were still negative. There is therefore no evidence that any primate other than man can serve as definite host of this tapeworm.

The experimental proof of the life cycle of *Taenia confusa* directs attention to the undoubted existence of this species of tapeworm in the Southern and Southwestern United States, both in the adult state as a human parasite and in the larval stage in cattle.

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Effects of Bacteriophage Upon Cultures of Entamoeba Histolytica.*

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The cultivation of *Entamoeba histolytica* has been made of practical and almost routine laboratory usefulness through the Boeck and Drbohlav¹ method of procuring cultures and the modification of Dobell and Laidlaw² has enhanced its success. However, the maintenance of continuous generations is often impaired and the strains frequently lost through the concurrent bacterial growth. As Dobell and Laidlaw have pointed out, the conjoint protozoal and schizomycetic microorganisms may attain an adaptation or adjustment that makes the amoebic growth luxuriant and the propagation of the culture simple. However, in continuing strains through many generations, the contamination or bacterial overgrowth feature is a most annoying factor and often threatens to destroy or actually causes the loss of the Entamoeba culture. As far as known the cultures of amoeba obtained by this method are always accompanied by bacterial growth and these accompanying microorganisms are regarded by many as obligatory commensals or symbionts to the protozoal culture. Many efforts have been made, however, to reduce the bacterial contamination both as regards numbers and species. Since nearly

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¹ Boeck, W. C., and Drbohlav, J., *Am. J. Hyg.*, 1925, v, 371.

² Dobell, C., and Laidlaw, P. P., *Parasitol.*, 1926, xviii, 283.