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OBSERVATIONS ON A POLYCEPHALIC CESTODE LARVA FROM A NILE RAT (ARVICANTHIS NILOTICUS)

A polycephalic tapeworm larva was recovered from the liver of a Nile rat (*Arvicanthis niloticus*) captured in the Shambat area of Khartoum. The larva consisted of a bladder from which radiated ten segmented strobilae with evaginated scolices at their distal ends. Each scolex was armed with 48—52 taeniid-like hooks of two types, a large and a small (Fig. 1), arranged as a double crown on the rostellum. The large hooks measured 325—335 μm in length (mean, 331 μm) and the small ones 200—220 μm (mean, 216 μm).

Several authors described polycephalic cestode larvae with externally-radiated scolices from rats and mice, considering these larvae as anomalous strobilocerci of *Taenia taeniaeformis* (Southwell T. and Kirshner A., 1937: Helminth. Abstr., Ser. A, 6: 35; Dollfus R. P., 1938: Helminth. Abstr., Ser. A, 7: 6; Dollfus R. P. and Saint Girons M. C., 1958: Helminth. Abstr., Ser. A, 27: 290). Kuntz (1943: J. Parasitol. 29: 424—425) suggested that the occurrence of more than one scolex in a larva that normally possesses only one such organ may be due to alterations in the germinal layers, probably mediated by chemical or physical factors, or by invasion of the surrounding host tissue. A cestode larva with 22 scolices was found by Dollfus (1951: Helminth. Abstr., Ser. A, 20: 34) in the pleural cavity of a gerbil. Using hook measurements and numbers as criteria, Dollfus considered the scolices of this larva to be different from that of *T. taeniaeformis*. Hooks of the polycephalic larva from the Nile rat resemble those of *T. taeniaeformis* in number and size but they are distinct morphologically. The shape of the hooks also excludes this larva from being *Taenia endothoracicus*

or *Taenia selousi* larvae (both larvae are polycephalous, they possess 52—60 and 48—58 hooks on their rostella, respectively, and they parasitize rodent hosts; see Verster A., 1969: Onderstepoort J. vet. Res. 36: 3—58). The hooks are identifiable with those of *Taenia parva* by their morphology, number and size (Wardle R. A. and McLeod J. A., 1952: The Zoology of Tapeworms. University of Minnesota Press, Minneapolis, 780 pp.; Verster A., 1969: Onderstepoort J. vet. Res. 36: 3—58). The descriptions given for the morphology of the larva of this tapeworm differed. According to Baer (1971: Animal Parasites. Weidenfeld and Nicolson Ltd., London, pp. 136—139) it is "a multicephalate cysticercus containing about twenty scolices in a common cavity". Nelson et al. (1965: Trans. R. Soc. trop. Med. Hyg. 59: 507—524), however, described this metacestode as a spherical cyst "which falls between the strobilocercus of *H. taeniaeformis* and the coenurus of *Multiceps* ..., each cyst contained 8—12 well developed scolices...". When the larva from the liver of *A. niloticus* was placed in warm physiological saline, its strobilae showed active contractile movements as a result of which the scolices were repeatedly closely drawn against the bladder wall. The larva only momentarily assumed a discrete spherical shape (see Nelson et al., 1965: Trans. R. Soc. trop. Med. Hyg. 59: 507—524) and it resembled the coenurus of *Multiceps* superficially.

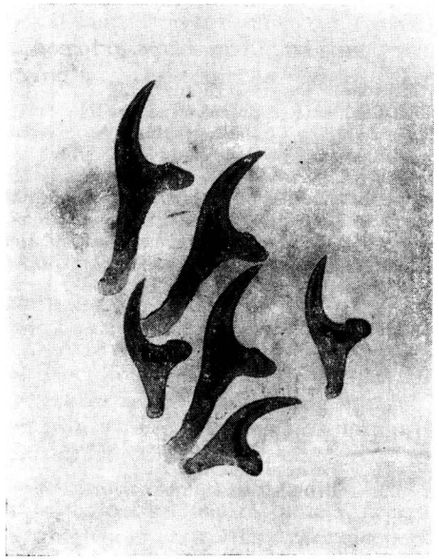

Fig. 1. Rostellar hooks of larval *Taenia parva* (mounted in Hoyerss medium).'

Encapsulated with the larva in the same site in the liver was a translucent cyst containing eight whitish bodies and measuring about 1 cm in diameter. On close examination, these bodies were found to be scolices with large and small taeniid-hook blade portions on the rostellar region. According to Clapham (1942: J. Helminthol. 20: 25—31), "the large taeniid hook appears to develop from at least two centres of chitinization..., the blade and guard portion appears early...". The scolices in the cyst were therefore considered to be immature and the cyst was diagnosed as a developing *T. parva* larva.

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