

## An Occurrence of New Tapeworm *Diplopylidium Murtizapurensis* N.sp. From the Intestine of the Cat, *Felis* *Domesticus*) at Murtizapur, Maharashtra



### Zoology

**KEYWORDS :** Mammalian Diseases, Tapeworm *Diplopylidium murtizapurensis* n.sp. Intestine, *Felis domesticus*, Murtizapur

B.W. Sawarkar

Department of Zoology, G. S. Science, Arts and Commerce College, Khamgaon Dist. Buldana 444 312 (M.S.)

### ABSTRACT

*In the present worm, the mature segments are three times longer than broad having double set of reproductive organ and measure 0.73 x 0.522 in length and breadth. The testes are small large oval or rounded uniformly distributed in the central medulla almost from anterior to posterior margin of proglottids, overlapping the female gonads, while spreading evenly, 85-90 number and measure 0.002-0.051 in length and 0.017-0.046 in breadth. The cirrus pouch is cylindrical, curved elongated, reaching upto the centre of the proglottid, curved anteriorly at one fourth from the anterior margin of the proglottid obliquely situated, at antero-lateral margin and measures 0.173 - 0.204 x 0.041 - 0.051 in length and in breadth. The cirrus is long coiled, enlarged atrium and measures 0.0-291 x - 0.311 in length and 0.01-0.006 in breadth.*

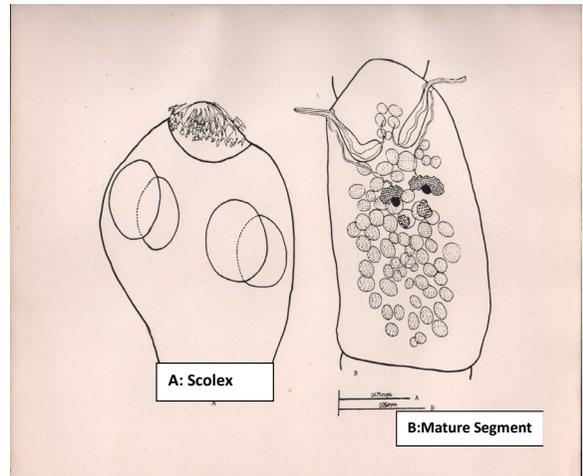
### Description:

Six worms were collected from the intestine of Cat, *Felis domesticus* in the month of November, 1983 at Murtizapur, district Akola Maharashtra State, India. On observation they proved to be the members of the genus *Diplopylidium*. The worms are medium and small in size, with scolex neck immature, mature and gravid proglottids and each proglottid with a double set of reproductive organs.

The scolex is large, globular, distinctly marked off from the neck much wider than it and measures 0.32 in length and 0.365 in breadth. An armed rostellum is present on the scolex which is saucer shaped measures 0.087 x 0.153 in length and breadth. It bears 88 bifurcated hooks arranged in four circles. Each row with 11 hooks. The handle of each hook is broad, measures 0.321 x 0.071 in length and breadth and inner shorter one is 0.039 x 0.003 in length and breadth.

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The ovary is irregular compact and oval in shape. Each ovary is in each poral half, at the middle or slightly anterior to the middle of the proglottid transversely and obliquely situated and measures 0.074 x 0.022 - 0.039 to 0.107 x 0.025 - 0.034 in length and breadth. The vagina is thin a coiled tube starts from genital atrium runs obliquely towards ovary and measures 0.247 - 0.284 in length and 0.003 - 0.005 in breadth, enlarges in to receptaculum seminis at anterior end of the ovary takes a turn, reaches and opens in to the ootype, The ootype is oval, small, posterior to ovary and measures 0.034 - 0.043 in length and 0.025 - 0.034 in breadth. The vitelline glands are small and large ovary almost irregular with lobes and measures 0.034 x 0.025 to 0.043 - 0.030 in length and breadth.



**Fig.1. *Diplopylidium murtizapurensis* n. sp. (A: Scolex B: Mature segment)**

### Discussion :

The genus *Diplopylidium* was erected by Beddard, 1913 (syn. *Progynopylidium*) Skrjabin, 1924) with type species *D. genettae* from *Denetta dongolana*. Later on following species are added to this genus:

1. *D. acanthotretum* (Parona, 1877) Witenberg, 1932.
2. *D. fabulosum* (Meggitt, 1927) syn. *Joyeuxiella pasqualae* (Diamare, 1893) Hughes, Baker and Dawson, 1941.
3. *D. monoophorum* (Luhe, 1898) Dollfus, 1951.
4. *D. fortunatum* Meggitt, 1927; Syn. of *Joyeuxiella pasqualae* (Diamare, 1893) Hughes, Baker and Dawson (1941) in Cat, Egypt.
5. *D. nolleri* skrjabin, 1924, Syn. *Dipylidium trinchesei* of Lopez-Neyra and Munoz-medina, 1921, Lopez-Neyra, 1928 Joyeux and Baer, 1936 Lopez Neyza, 1944 and *Dendrolephis tristis pujatii*, 1948.
6. *D. quinquecoronatum* Lopez-Neyra at Munoz - Medina, 1921, Syn. of *D. acanthotretum* (Parona, 1866) Hughes, Bakar and Dawson, 1941, Lopez - Neyra, 1944.
7. *D. skrjabini* popov, 1935.
8. *D. trinchesei* (Diamare, 1892) probably *Cysticercus acanthotremata* Parona, 1887, Parrot and Joyeux, 1920, Lopez, Neyra and Munoz-Neyra, 1927.
9. *D. triseriale* (Luhe, 1998) Lopez-Neyra, 1927).

*D. zschokket* (Hungerbuhler, 1910) Hughes, Baker and Dawson 1941.

The 10 species are considered valid by Yamaguti (1959) and later on no species is added to this genus. Yamaguti has added a foot note in *Systema Helminthum* Vol. II, Cestode, on page 413

that : "D. fobulosum, D. quinquecoronatum, D. trinchessii and D. triseriale are regarded by Witenberg, 1932 as identical with D. acanthotreta but has not given his opinion clearly but as he has included these four species in this species of the genus, the author also feels that they should be treated as identical with D. acanthotreta on the following ground.

The testes in D. acanthotreta are 30-60 where as the same in D. fabulosum are 48-64 in D. trinchessii are 4 and in D. triseriale are 39-44. The number of testes and their range is definite in these different species. Moreover, the rostellar hooks in D. acanthotreta are in 3-5 circles, 18-24 hooks per circle (i.e. 54-120 hooks) in D. fabulosum are 4 circles, in D. quinquecoronatum usually 5 but rarely 4 circles in trinchessii usually 5 but rarely 4 circles in D. trinchessii in 4 circles and 78-85 hooks and in D. triseriale in 3 circles.

The present communication deals with the new species of the genus Diplopylidium. The worm under discussion in having the scolex large, globular, distinctly marked off from the neck, rostellum saucer shaped, armed with four circles of hooks, 88 in number each with 11 hooks the hooks small, large and oval, mature segments 3 times longer than broad, cirrus pouch cylindrical, curved, reaching up to centre, cirrus protruded, cirrus. Ovary irregular, compact, oval, transverse and oblique, vitellaria small and large with irregular lobes with acini and postovarian.

The present cestode in having rostellum with 4 circles of hooks comes closer only to D. fabulosum but differs from the same in the number of testes (85-39) cirrus pouch 217-280 x 35-50 u, genital aperture in first fourth of the segment margin, and reported, from cat.

The characters are so distinct that there is no other way than to erect a new species to accommodate these worms and hence the name Diplopylidium murtizapurensis n. sp, is proposed, after its locality.

Type speies : Diplopylidium murtizapurensis n.sp.  
Host : Felis domesticus  
Habitat : Intestine.

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