of Ciliates, viz., astomates, commonly found in the alimentary canal and coelome of Oligochaeta. During the course of these investigations we came across a new species of the genus *Anoplephyra* Stein in the alimentary tract of *Perionyx excavatus* Perrier, from Barrackpore, West Bengal.

It is described in the present paper. The description is based partly on the observation on living animals and partly on stained examples. The material was fixed in Schaudin’s fluid and stained in Heidenhain iron haematoxyline and counterstained with eosine.

**DESCRIPTION**

![Figure 1](image_url)

**Fig. 1. Anoplephyra anilii** Mukherjee and Chakrabarti.

*Anoplephyra anilii*, n. sp.

Body elongately oval, anterior end broadly rounded, gradually narrower towards post pole, posterior end rounded, thickly and uniformly ciliate; Contractile vacuoles three observed in living forms. Macronucleus more or less band shape extending two-third of the body; micronucleus small, spherical placed by the side of the macronucleus. Clear distinction in the endoplasmic zone is well pronounced.

**Measurement**: Body—L 85 μ X B 48 μ; Macronucleus—58 μ.

**Types**: Holotype on slide: Paratype—2 specimens on slides will be deposited in the National collection of Z.S.I.

**Host**: *Perionyx excavatus* Perrier.

**Type locality of host**: Barrackpore, 24-Parganas, West Bengal, India; Date 16th April 1971. Coll. A. Chakrabarti.

**Remarks**: Among all the species of *Anoplephyra* described so far *A. anilii* n. sp. resembles *A. lumbrici* (Shrank) slightly in shape. *A. lumbrici* is easily distinguishable from the new species under report, in having the shape of body somewhat pointed at anterior end and distinctly curved longitudinally, i.e., dorsal side convex and ventral side concave in shape.

The name *Anoplephyra anilii* is proposed for this new species after the name of a renowned protozoologist, Dr. Anil Mandal.

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**Zoological Survey**: RATHTINDRA NATH MUKHERJEE.

of India, ASIM CHAKRABARTI.

8, Lindsay Street,


**HISTOPATHOLOGY OF DASYCHIRA MENDOSA** Hb. (LEPIDOPTERA : LYMANTRIIDAE) INFECTED WITH NUCLEAR POLYHEDROSIS VIRUS

An epizootic of nuclear polyhedrosis of *Dasychia mendoza* Hb. was reported for the first time by Rabindra and Subramanian (1974). With a view to understand the host-pathogen relationship, histopathological investigation was taken up using virus infected fourth and fifth instar caterpillars of *Dasychia mendoza* Hb.

Infected caterpillars in different stages of disease were fixed in alcoholic Bouin's fixative (Dubosque Brazil), washed in 70% ethyl alcohol, dehydrated in ethanol-butanol series and embedded in paraffin, according to standard procedures. Sections 4–6 μ were stained by a modified azan staining technique after Hamn (1966). The pathological changes in the various tissues as observed in the light microscope are presented below.

The principal tissues, found to be susceptible, were fat body, tracheal matrix, hypodermis, nerve cells (Fig. 1) and blood cells. According to Aizawa (1963) and Smith (1967) fat body, hypodermis, tracheal matrix and blood cells are the chief sites of multiplication of the virus. However, in the present instance, infection of other tissues such as muscles, connective tissues surrounding the midgut and testicular epithelium were also found to contain polyhedra in the nuclei. Infection of these tissues has been reported by Benz (1963) in
**Malacosoma alpicola** and Hamm (1968) in *Spodoptera frugiperda*.

**PHYTOPHTHORA PARASITICA—A NEW RECORD FROM SOUTH INDIA ON TOMATO**

A tomato fruit rot, hitherto undescribed from South India, was found for the first time in July 1973 at the Main Research Station, Bangalore. The same rot was also observed in August 1974 on the tomato variety 'Pusa Ruby' and some other selections resistant to the root-knot nematode. The disease was noticed only after the onset of rains when the weather conditions were warm and wet. The rot was observed to affect about 30% of the tomato fruits under field conditions.

The rot is usually confined to the fruits in any stage of development. More often the fruit rot is marked by one or more fairly broad, irregular zones of alternating shades of brown and grayish brown, forming a typical buckeye effect (Fig. 1). The rot is hard at first and the fruits rapidly decay and breakdown in a semi-rot later. A white, fluffy mold appears on the surface of the rot during rainy weather in advanced stage of fruit decay.

![Fig. 1](image_url)

**FIG. 1.** Cross section of nuclear polyhedrosis virus-infected *Dasychira mendosa* showing polyhedra (P) in hypertrophied nuclei of a, hypodermis (H). Line = 0.14 mm; b, tracheal matrix (T) and fat body (F). Line = 0.07 mm; c, nerve cells of brains (B). Line = 0.106 mm.

Early signs of infection could be observed in fat body, hypodermis and trachea 48 hours after infection. Infection of other tissues like blood cells, nerve sheath and gonads could be observed only 72 hours after inoculation. In the case of fat body it was noticed that polyhedra in certain nuclei were larger than those in the adjacent nuclei. These nuclei were found to rupture earlier releasing the polyhedra. Silk glands, foregut and malpighian tubules were not found to be affected by the virus.


**FIG. 1.** Buckeye effect of tomato rot caused by *Phytophthora parasitica*.

Repeated isolation from the tissues of the tomato fruit affected with the rot invariably yielded *Phytophthora parasitica* Dastur usually in pure cultures. Inoculations of tomato fruits, detached from the plant and undetached, and of all stages with pure cultures of the fungus, invariably resulted in reproduction of the rot. Repeated resolations made from artificially infected fruit yielded again *P. parasitica*.

*P. parasitica* has been reported to cause damping-off of tomato seedlings by Singh and Srivastava (1953) from Uttar Pradesh. This organism has also been reported by Rao (1966) from Maharashtra State to cause soft rot of tomato in market and storage. Likewise Sharma (1974) reported that this fungus causes buckeye rot of tomato in Himachal Pradesh. This is the first report of this organism on tomato from South India.