

Of the two *Myxobolus* sp. described in this report, the one parasitizing the gills of *C. mrigala* was found to resemble *Myxobolus dispar* Thelohan, 1895, in having unequal polar capsules and an intercapsular ridge, but differs from it in the size of the spore and the polar capsule as well as in not having thickenings or articulations on the shell valves. Further, this species also resembles *M. vanivilasae*² in the shape of unequal polar capsule and in having intercapsular ridge, but differs from it in the site of infection, size and shape of the spore and the size of the smaller polar capsule. The other one collected from *P. curmuca* had similarity with *Myxobolus batae* described from *Labeo bata*³ in the shape of the spore and the polar capsule, presence of an intercapsular ridge and in the size of the spore. But it differs in the site of infection, absence of thickenings on the sutural ridge and in the thickness of spore. Further, this species also had similarity with *M. vanivilasae* in possessing both equal and unequal polar capsules, presence of intercapsular ridge and the site of infection, but differs from it in the spore shape and size of the polar capsule. Since, the present two species of *Myxobolus* collected from *C. mrigala* and *P. curmuca* do not compare well with other species of *Myxobolus* described so far,⁴⁻⁸ they are considered new and are named as *Myxobolus carnaticus* sp. nov. and *Myxobolus curmucae* sp. nov. respectively. It may be added that this is the first record of *Myxobolus* sp. infection on *P. curmuca*.

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HISTOPATHOLOGY OF THE CESTODE *AMOEBOTAENIA INDIANA* (COHN, 1900) FROM *GALLUS DOMESTICUS* AT AURANGABAD, INDIA

THE cestode *Amoebotaenia indiana* has been found in large numbers in the intestine of *Gallus domesticus* at Aurangabad, India. The worm is short with a penetrative type of scolex, the rostellum is provided with hooks. It penetrates the mucosa and the submucosa and adheres there very firmly and does not reach the muscle layers. Plug formation is seen at the ruptured epithelial portion, which may have been formed from lymphocytes and eosinophilic cells.

Pieces of the infected and uninfected intestine were fixed in Bouin's; they were dehydrated by graded alcohols, cleared and embedded in paraffin wax. The transverse and longitudinal sections were taken at 7 μ . The slides were stained with (Weigert's) iron haematoxyline and eosine.

These cestodes get attached to the host by the hooks on the rostellum. Here the worm tries to approach the intestine through the crypts of Lieberkuhn (Fig. 1) and succeeds in destroying the crypts and reaching upto the submucosa (Fig. 2); later the hooks of the rostellum pierce through the submucosal epithelial tissue (Fig. 3).

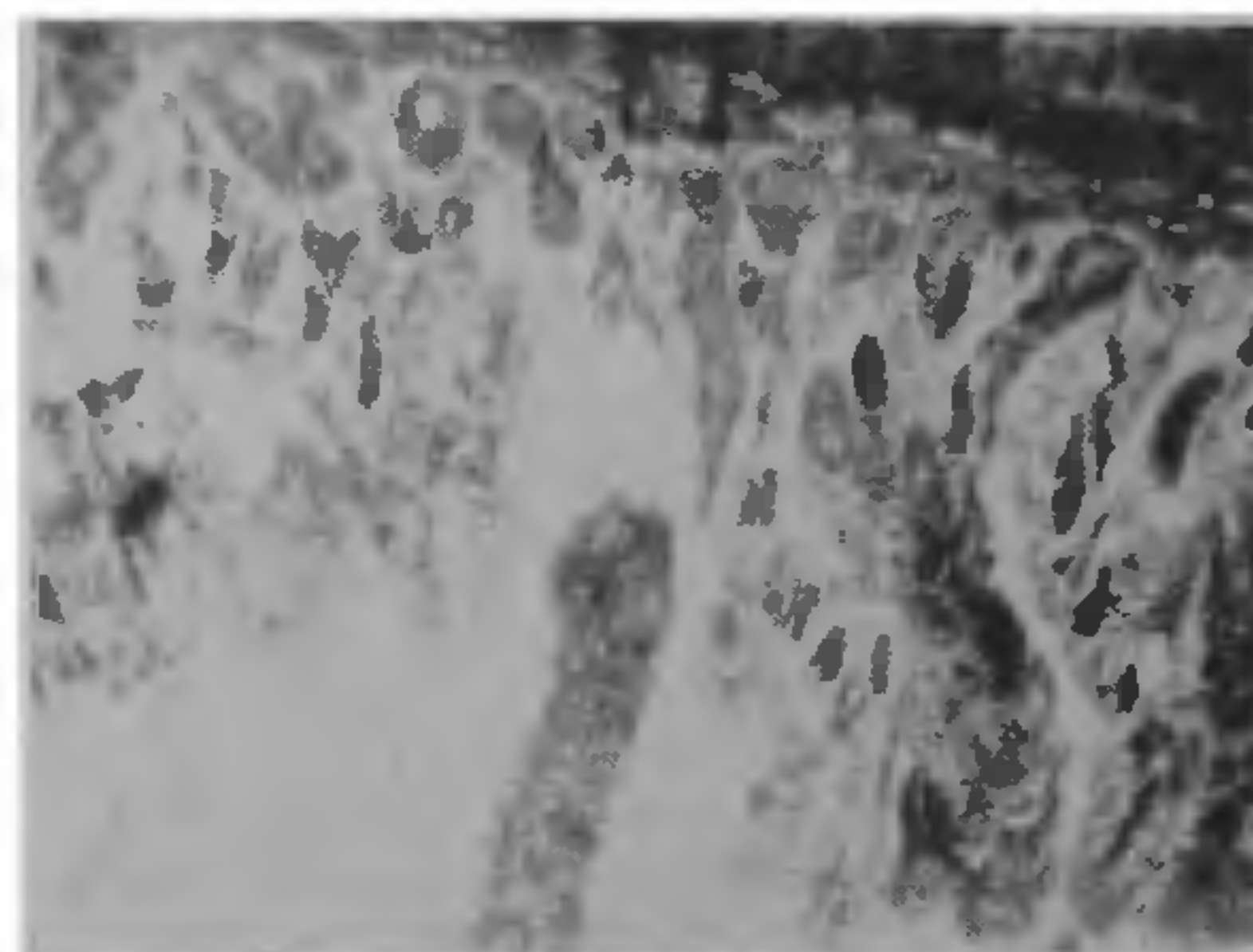


FIG. 1. *Amoebotaenia indiana* is approaching the crypts of Lieberkuhn of *Gallus domesticus*.

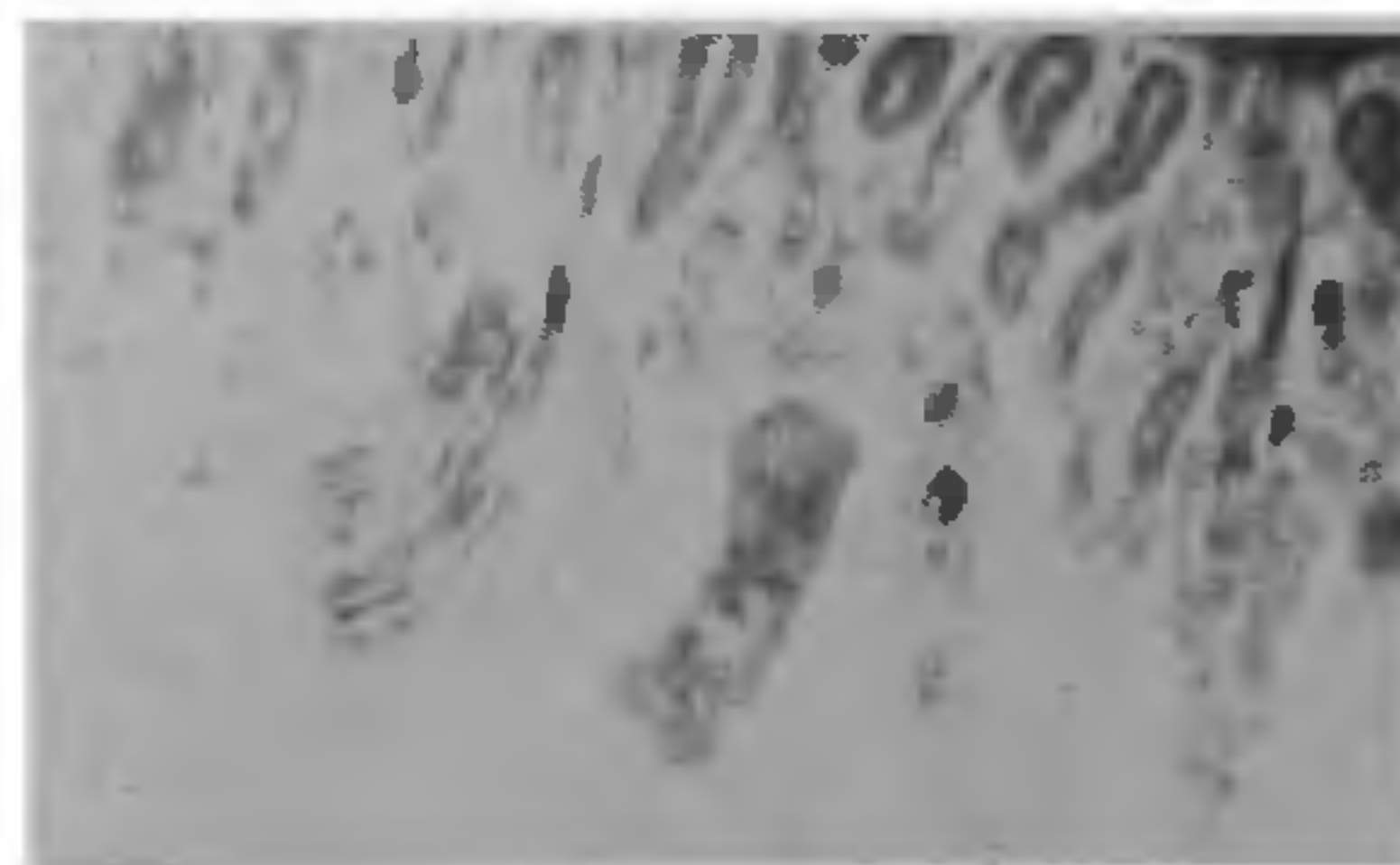


FIG. 2. *Amoebotaenia indiana* through the crypts upto the submucosal layer of *Gallus domesticus*.

When these tissues get disturbed and become loose, the rostellum protrudes and deepens its position in the intestine for a firm attachment; it pierces in a gland of the worm's submucosa, with half of the body of the worm inside the intestine and half fragile (Fig. 4). Though this worm tries to overcome the entanglement of the crypts of Lieberkuhn, it cannot reach the muscle layers, probably due to the absence of neck and the short length.

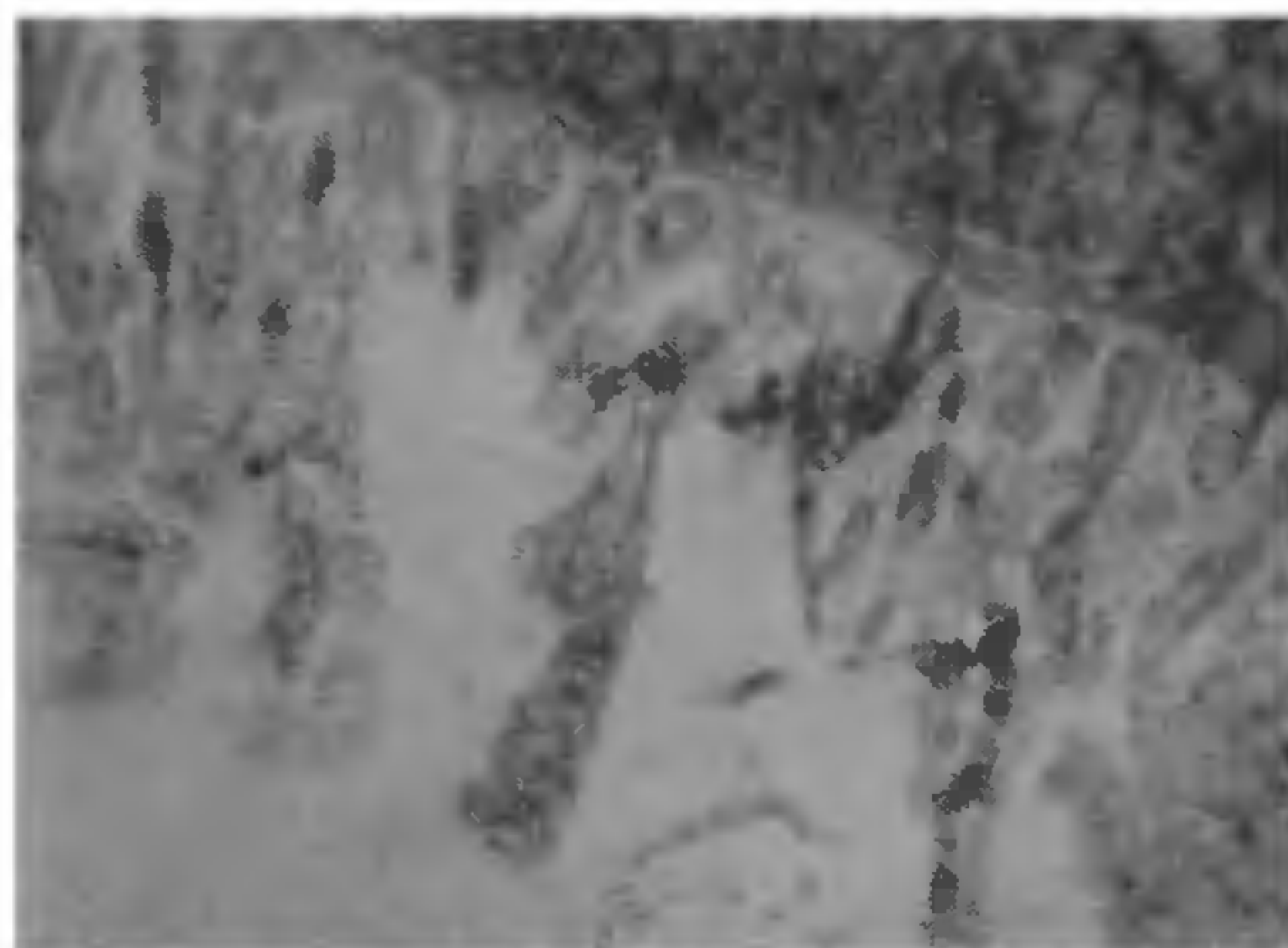


FIG. 3. Rostellum of *Amoebotaenia indiana* piercing through submucosal epithelial tissue of *Gallus domesticus*.

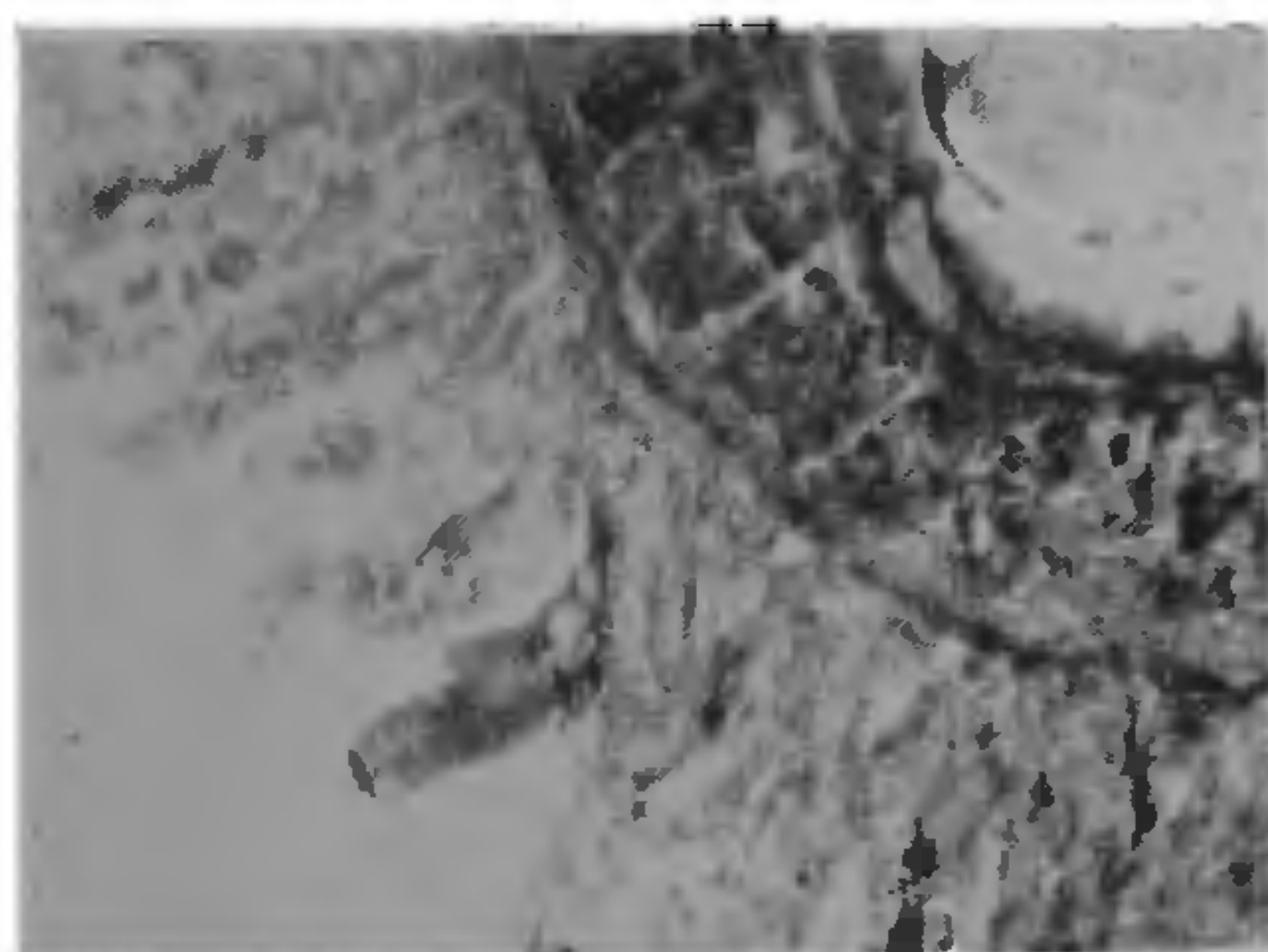


FIG. 4. Protruded rostellum of *Amoebotaenia indiana* embedded in the intestine of *Gallus domesticus*.

Tissue reaction and cellular infiltration occur at the point of attachment, and the viscid material leaks out forming a sticky plug (due to the mycin present in the submucosa) from which the worm uses the material

for its nutrition (Fig. 5). At the plug formation site, there is a large accumulation of blood cells supplied by the host where reaction of the cell material takes place forming eosinophilic cells, leucocytes and lymphocytic cells.

This inter-relation of the parasite with the host results in the survival of the parasite and a slight damage to the host intestine since the parasite does not reach beyond the submucosal layer as *Railietina* (*Raillietina*) *tetragona* in the same host.

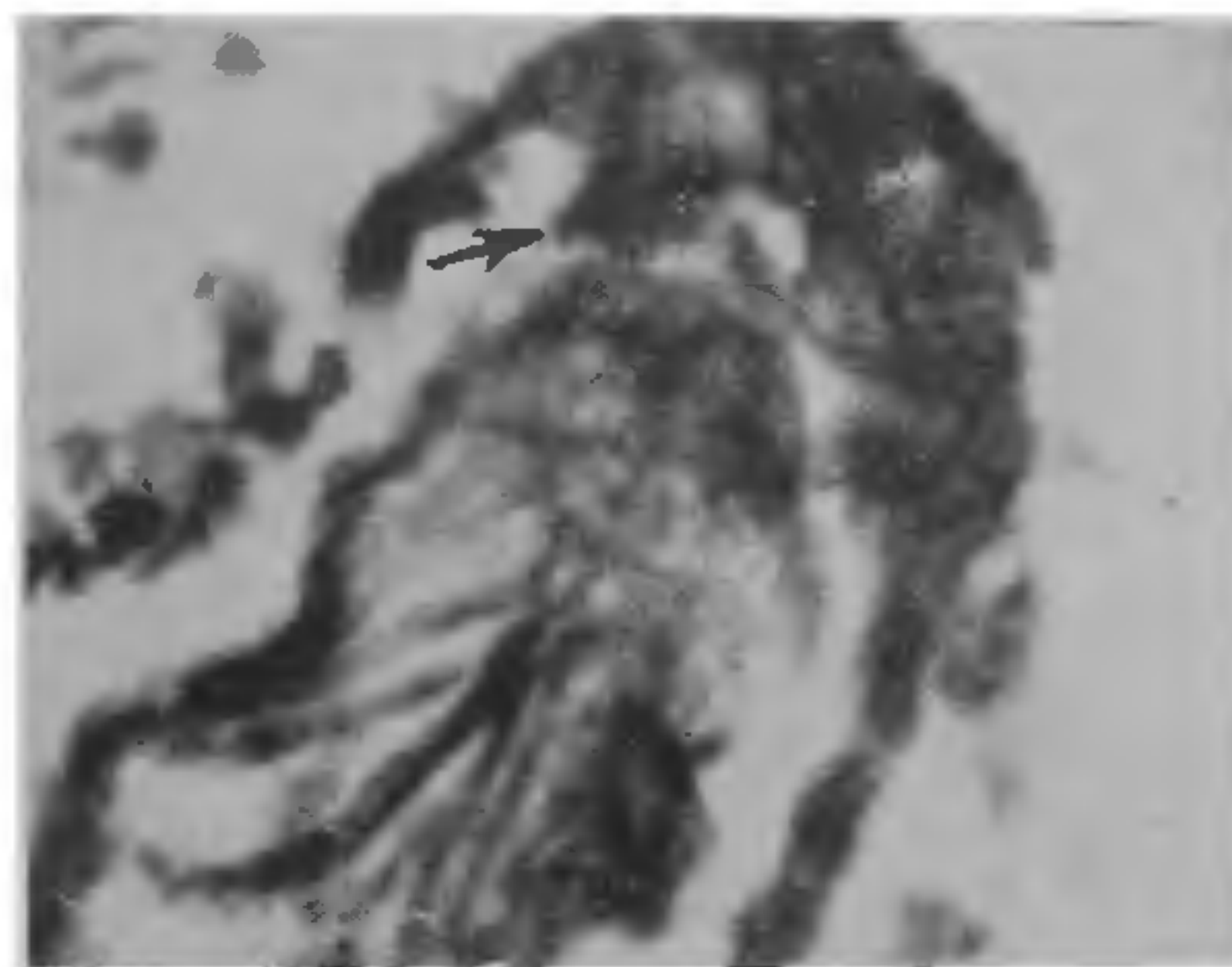


FIG. 5. Arrow showing plug formation of the ruptured tissue of *Gallus domesticus* by the rostellar hooks of *Amoebotaenia indiana*.

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