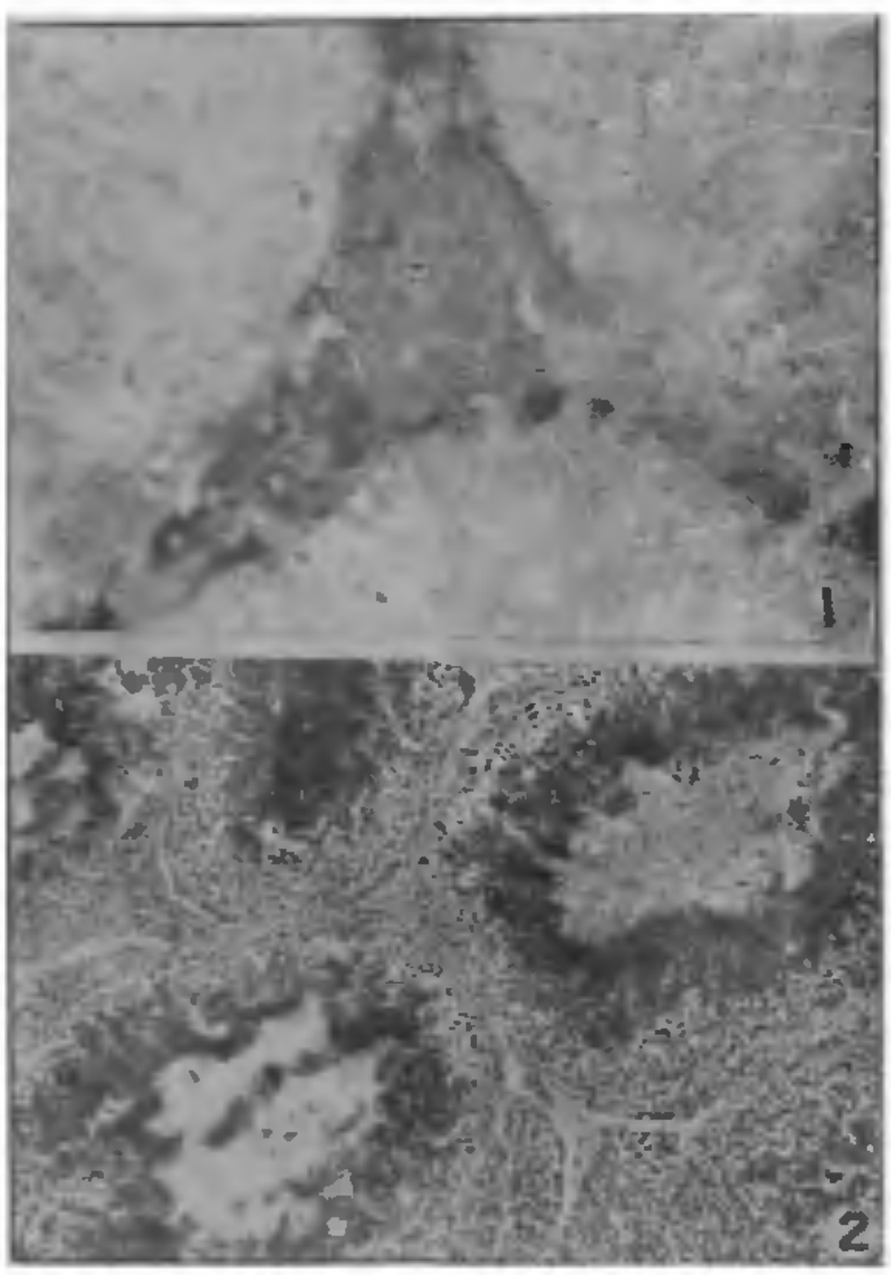
$NADH_2$-diaphorase catalyses the latter part of the reaction. Hence the presence and distribution of $NADH_2$-diaphorase in the tissue is one of the limitations in the histochemical localization of Δ^5 3β *HSDH*, and it should either be ubiquitous or at least be present at the site of Δ^5 3β-HSDH[3]. The possible explanations for the formazan observed in the seminiferous tubules in *M. carinata* are the following: (i) a false positive reaction or "nothing dehydrogenase" effect which may be pH dependent, (ii) non-specific reduction of the tetrazolium, probably non-enzymatic, (iii) a broad-spectrum alcohol dehydrogenase in the seminiferous tubules capable of oxidising the steroid substrate[8], (iv) differential histochemical threshold of the localisation of Δ^5 3β-HSDH in the seminiferous tubules and the interstitial cells of the testis, selectively demonstrable at different values of pH[2].



FIGS. 1-2. Fig. 1. Cross-section of the testis of *M. carinata* showing Δ^5 3β-HSDH activity in the interstitial cells at pH 8·0 (8 × 40). Fig. 2. Cross-section of the testis showing the formazan mainly in the seminiferous tubules at pH 7·5 (8 × 10).

Δ^5 3β-HSDH which has been demonstrated in the interstitial cells of many reptiles[9-12], and *in vitro* biochemical conversions[13,14] strongly point out, the involvement of Leydig cells in the interstitium of the reptilian testis in the biosynthesis of androgens. The demonstration of this enzyme, in interstitial cells of the testis in *M. carinata*, hardly leaves any doubt as to their potentiality in steroidogenesis, though involvement of seminiferous tubules at least partly cannot be ruled out

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INDUCED PARASITISM OF A FREE-LIVING NEMATODE, *ACROBELOIDES APICULATUS* (THORNE, 1925) IN DIPTEROUS LARVAE

STEINER AND BUHRER[2] and recently Wasilewska and Webster[4] have reviewed the importance of free-living nematodes as disease factors of man and his crops. *Acrobeloides apiculatus* (Thorne, 1925) Thorne, 1937, a free-living nematode is of frequent occurrence in Aligarh soils. The latter also usually contains dipterous larvae of an unidentified species. The nematodes were raised *in vitro* on Nigon's agar medium (bacteriological). Although in nature the nematodes were never found to parasitise the dipterous larvae, but when introduced artificially by making a small incision at the anterior end of larvae they started to live in the coelom as parasites without themselves showing any obvious signs of discomfort. When gravid females of *A. apiculatus* from the culture were introduced within the body cavity of dipterous larvae (Fig. 1) they failed to lay eggs which then began to develop inside the uterus (intra-uterine egg development). The hatching also took place within the uterus and the juveniles of *A. apiculatus* began to feed upon the body tissues of the mother which ultimately died and the juveniles were liberated in the coelom of the dipterous larvae.

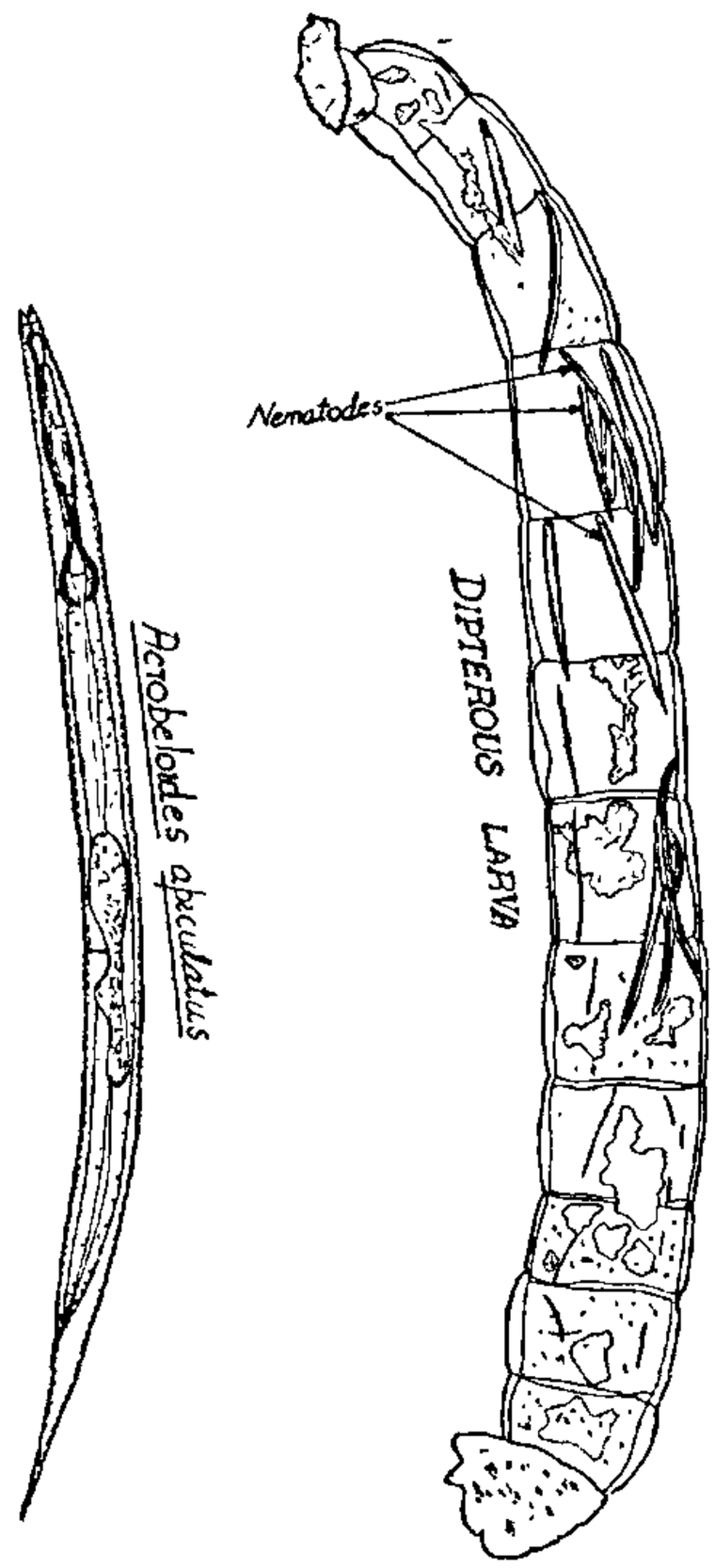

FIG. 1. Showing the nematode, *Acrobeloides apiculatus* and the dipterous larva with the nematodes within its body cavity.

They moved freely within the body cavity of the insect which started showing signs of sluggishness. The growing juveniles now began to feed upon the body contents of the dipterous larva which resulted in its ultimate death. The nematodes did not leave the dipterous larva but continued to feed upon its dead tissue and grew to maturity. The cuticle of the insect larva which was used by the nematodes as a protective cover ultimately gave way setting them free. This appears to be an interesting and unique case of induced parasitism. Another species of this genus, *A. buetschilii* was reported by Thorne[3] to feed on the remnants of the internal organs of *Heterodera schachtii*, the sugar-beet cyst eelworm.

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INFLUENCE OF METHOD OF INOCULATION ON SPORULATION OF SOME LIGHT-REQUIRING FUNGI

IT has been reported earlier from this laboratory[1] that an isolate of *Phoma* and *Ascochyta pisi* (which normally require) light for sporulations sporulate even in darkness when grown on cellophane film or filter-paper overlying agar medium. Further work on these two fungi and a few others has revealed that the method of inoculation of agar plates also influences sporulation considerably. The results of these experiments are presented here.

Besides the *Phoma* isolate (Ph 1) and *Ascochyta pisi* (AP 1) used in the earlier experiments[1], a second isolate of *Phoma* (Ph 2) and one of *Leptosphaerulina arachidicola* (LA) isolated from groundnut leaves and an isolate of *A. pisi* (AP 2) originally procured from Baarn were used in the present studies. Isolates Ph 1 and 2, AP 1 and LA sporulate normally only when exposed to light from fluorescent daylight or black light lamps. AP 2 did not form pycnidia even when exposed to light. Czapek's agar medium containing 0·1% yeast extract with or without cellophane film overlying the agar was inoculated by two different methods. Either a bit of mycelium from a dark-grown culture was placed in the centre, or a suspension prepared by breaking up dark-grown mycelium with glass beads in sterile distilled water was spread over the surface of the agar or cellophane with a glass spatula. The cultures were incubated in darkness or in light provided by 2 daylight tube lamps (40 W) and 1 Sylvania F 40 BL lamp (30 cm below the lamps) in a 12 : 12 h light-dark cycle. Corning petri dishes were used throughout[4].

The results presented in Table 1 relate to observations made on the fifth day after inoculation.

When inoculated at one point (centre of plate) Ph 1 and AP 1 behaved as before[1] sporulating even in darkness when cellophane was present. Ph 2 needed presence of cellophane even in light for sporulation. AP 2 did not sporulate with this method of inoculation under any condition. LA formed only sterile perithecia except in cultures raised under light on cellophane. However, the results were dramatically different when mycelial suspensions of these fungi were spread over the agar/cellophane. When inoculated in this manner, Ph 1 and AP 1 sporulated in dark even in the absence of cellophane. Ph 2 no longer required cellophane for pycnidial production in light. AP 2 formed sterile pycnidial bodies in light as well as darkness on cellophane. Fertile