

where the plants have reached only very recently. When Bruhl wrote his paper, the species was found at Calcutta mostly near about the Hughli. Now it is abundant on every side there. At Sylhet, I found it to be growing most abundantly on the banks of the Soormah. Haines found it in Orissa to be most abundant on the banks of the Mahanadi. At Benares, I have collected most of the specimens of this species from the banks of the Ganges and the small stream Barna. So far, I have been able to get only one specimen from some distance from the Ganges. This shows that the species most probably has been spreading along the banks of the various streams.

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Influence of Magnetic Field on Electrolysis.*

WE have observed that the current passing through two platinum electrodes placed symmetrically in a solution of an electrolyte changes in value if a magnetic field is applied at right angles to the current. With different electrolytes the change in the electrolysing current is either an increase or a decrease and remains more or less steady for the short time for which the field is kept on. On cutting off the field the current tends to attain its original value.

The changes in the electrolysing current were measured by a milliammeter placed in series with an electrolytic cell which was well cleaned before each observation. The electrodes employed were rectangular and were fixed to a glass vessel parallel to each other. They were made of stout platinum foil and there was no chance of movement. The following is the list of the electrolytes which showed the above described magnetic effect.

TABLE I.

(a) Increase in the electrolysing current.	Copper and zinc sulphates; copper and silver nitrate; copper, zinc, stannous and mercuric chlorides; copper acetate.
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(b) Decrease in the electrolysing current. Barium, strontium and cobalt nitrates; nickel, aluminium and manganese chlorides; potassium dichromate, chlorine and bromine water and iodine in potassium iodide solution.

The amount of the change in the electrolysing current is very small in concentrated solutions but it increases rapidly as the solutions are diluted. In dilute solutions (a) type of electrolytes show a greater change than the (b) type. On increasing the strengths of the electrolysing current and of the magnetic field the magnitude of the change increases almost linearly. The electrolysing current varied from 60–150 milliamps. and the magnetic field was 3,700 gauss when the distance between the pole pieces was 20 mm.

By carrying out experiments with rectangular electrodes capable of rotation through any desired angle, it was observed that the maximum effect was produced when the electrodes were parallel.

It was further noticed that the bubbles of gases which are liberated during the electrolysis of a solution and which rise upwards along the surfaces of the electrodes, move in a spiral path round the electrodes as soon as the magnetic field is switched on. On careful examination it was noticed that the big bubbles of gases are deflected sideways from the electrodes during their upward journey while the tiny ones are deflected according to the direction of the magnetic field.

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Syphacia sciuri n.sp., A New Oxyurid-Worm from *Sciuris palmarum*.

ONE male and four female specimens of a new Oxyurid-worm were recovered from the large intestine of a squirrel *Sciuris palmarum*.

The females measure from 2.46 to 3.24 mm. in length and 0.19 to 0.23 mm. in breadth. The vulva is situated anteriorly at a distance of 0.61 mm. from the cephalic end (Fig. 1). The eggs are oval and measure 0.11×0.04 mm.

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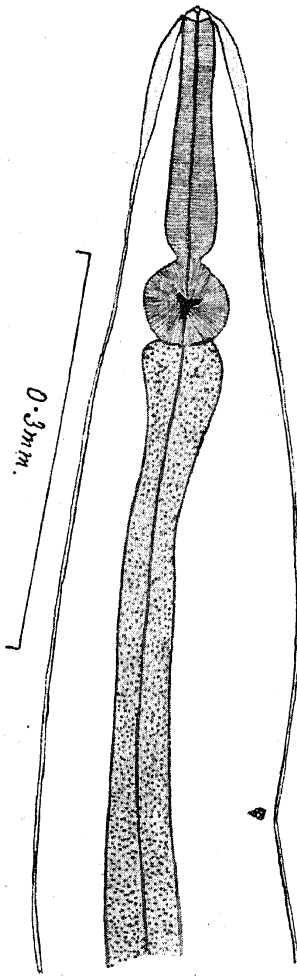


Fig. 1.

S. sciuri n. sp.
Anterior extremity of Female,
showing the vulva.

The mouth is bounded by three lips and a buccal capsule is absent. The œsophagus is 0.24 mm. long including the bulb. It consists of an anterior club-shaped portion and a posterior spherical bulb with a valvular apparatus and separated from the rest by a constriction. A pair of small lateral cervical alæ is present.

This species closely resembles *S. obvelata* but it distinctly differs from it in possessing a cuticular "mamelon" on the dorsal side. This character is enough to create a new species and in this connection we suggest that the presence or absence of a dorsal "mamelon" be added to the generic characters of the genus *Syphacia* *seurat*, 1916.

We take this opportunity to express our sincere thanks to Dr. Bains Parshad for lending us, from time to time, the desired literature from the Library of the Zoological Survey of India, Calcutta.

The solitary male measures 1.3 by 0.8 mm. The caudal end is pointed and curved ventrad. Above the cloaca there are three distinct "mamelons". Two of these are situated on the ventral side and one on the dorsal side. There are two pairs of preanal and one pair of post-anal pedunculated papillæ. The spicule measures 0.07 mm. in length. The gubernaculum is directed transversely. Small caudal alæ are also to be noticed. There are two lateral alæ present in the region of the intestine, spreading from beneath the bulb of the œsophagus to just above the cloacal aperture (Fig. 2).

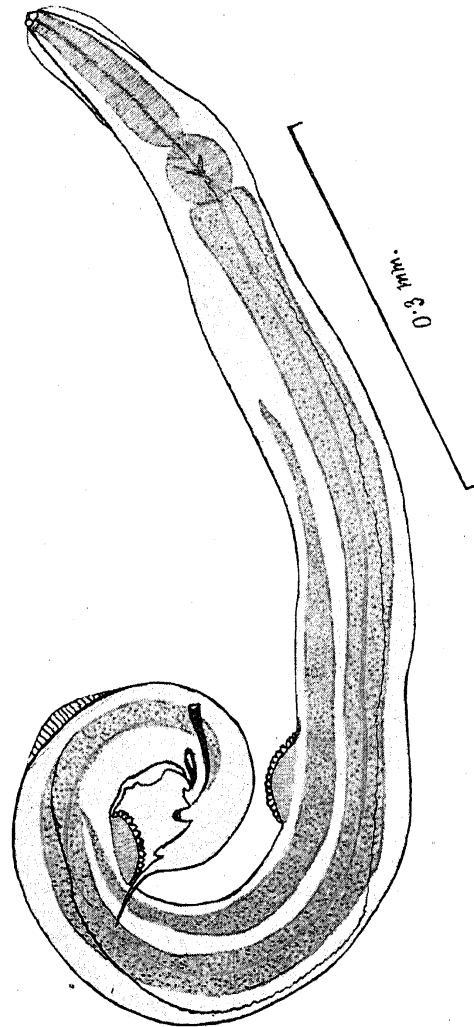


Fig. 2.

S. sciuri n. sp. Entire male.

Type specimens are in the Museum of the Zoological Laboratories, Muslim University, Aligarh, U. P., No. 1,000.

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