

Castronodus strassenii, G. et sp. n.*

A New Nematode Parasite of *Crocidura caerula*—the Common Musk-shrew or as it is usually called Musk-rat (Vernacular: *Chachundar*.)

AMONGST the Musk-rats a very heavy infection of this new type of worms prevails in the Hyderabad State. In August 1933, 120 specimens were dissected by me in the Plague Department, Hyderabad City and out of these 37 were found to be infected. The worms occur in nodules in the wall of the stomach. When extracted out of these nodules they are blood-red in colour but turn white after fixation.

The mouth of the worm is surrounded by 6 cephalic papillæ and leads into a buccal capsule which measures 0.05 mm. in length. There are 6 well-developed tooth-like processes projecting into the buccal capsule (Fig. 1). The œsophagus consists of a short

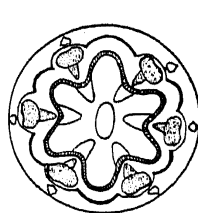


Fig. 1.

Diagrammatic representation of the mouth, surface view.

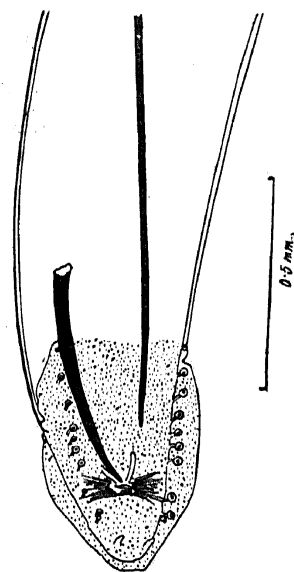


Fig. 2.

Posterior end of the male showing the right spicule, a part of the left spicule, a pair of spine-like process, caudal alæ and the papillæ.

narrow muscular portion and a long, wide glandular part. Its total length is 2.6 mm.

The females are 25 to 40 mm. in length. The vulva lies in front of the posterior end of the œsophagus and is situated at a distance of 1.5 mm. from the anterior end.

The males are 16 to 26 mm. long. They possess caudal alæ and in the mature males

* The Species is named after Geheimrat Prof. Dr. O. zur Strassen of the University of Frankfurt on-the-Main, Germany.

there are 7 pairs of pre-anal and 3 pairs of post-anal pedunculated papillæ. Near the tip of the posterior end there are two spine-like processes. The spicules are very unequal. The right spicule measures 0.45 mm. and the left 2.7 mm. in length.

These new nematodes belong to the family *Spiruridae* (Oerley, 1885), sub-family *Spirurinae* (Ralliet, 1915). They exhibit some affinities with the genus *Spirocerca* (Ralliet and Henry, 1911) but differ from it markedly and necessitate the creation of a new genus.

The distinguishing characters are as follows:—

(1) Unlike the genus *Spirocerca* in this new genus there are 6 well-developed tooth-like processes projecting into the buccal capsule.

(2) In the males instead of 4 pairs of pre-anal and 2 pairs of post-anal pedunculated papillæ there are 7 pairs of pre-anal and 3 pairs of post-anal papillæ to be found.

(3) The large medium papilla so characteristic of the genus *Spirocerca* is absent here.

(4) Instead of 4 or 5 pairs of minute papillæ at the tip of the posterior end, a pair of spine-like process is present.

The anatomy and life-cycle of this new Nematode will be published elsewhere.

I express my gratefulness to Dr. C. F. Chenoy, Special Plague Officer, Hyderabad City, for giving me all the facilities for the collection of worms.

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January 20, 1934.

The Melting Point of a Certain Aminodimethoxybenzoylpropionic Acid.

In connection with the note¹ on this topic recently communicated by Dr. J. N. Ray, it must be at once observed that further experience with the acid in question has shown that its behaviour on heating varies in a somewhat capricious fashion. It depends to some extent on the way in which the sample is dried, and also on the rate of heating. If rapidly heated, the m.p. appears to be approximately 120° in confirmation of Haq, Kapur and Ray (*J.C.S.*, 1933, p. 1087), but if the pure dry acid is heated slowly it

¹ *Curr. Sci.*, 2, 247, 1934.

only sinters at this temperature, hardens again, and melts at various temperatures from 130° to 145°, depending on the conditions of heating. In many cases it is difficult to observe the sintering, and with the technique employed by Miki and Robinson (*J.C.S.*, 1933, p. 1467) the m.p. was found to be 141°. The dehydration of the acid, with the formation of the lactam, evidently occurs on melting, but it is not complete when a specimen of the acid is merely heated in a capillary tube to its point of fusion. It is doubtful whether this acid can be stated to have a melting point which is a physical constant characteristic of its molecular species, and probably all the observed melting points have to do with a substance undergoing more or less decomposition. With Dr. Ray's remarks on the formation of a 7-ring lactam in many cases, the present writer is in complete agreement. However, the acid employed by Miki and Robinson was never melted, and consisted entirely of the amino acid, as shown by its ready solubility in aqueous sodium carbonate and dilute hydrochloric acid, as well as by its diazotizability and by the colour reaction with ferric chloride. It is with amino acid of this kind, and not with the decomposed fused amino acid, that we failed to confirm the condensation to a quinoline derivative, using as second component acetaldehyde under the conditions described by Haq, Kapur and Ray.

Admittedly we made only one experiment, in which, however, we recovered the amino acid unchanged.

In regard to the question of the condensation of the aminodimethoxybenzoylpropionic acid with acetylacetone, and with dibenzoylmethane, Dr. Ray has not quite correctly represented our views on the subject. Miki and Robinson (*loc. cit.*) express no view as to the constitution of these substances, but merely pointed out the necessity for fresh experimental evidence. It will be simplest to reproduce the paragraph of our paper dealing with this subject:—

"Haq, Kapur, and Ray (*loc. cit.*) condensed aminoveratroylpropionic acid with acetylacetone and isolated a product, m.p. 245°. Similarly, the quinolines from aminoveratroylpropionic acid and acetophenone and dibenzoylmethane had m.p.'s 231°-232° and 229° respectively. Carbon and hydrogen estimations are required in order to confirm the view taken of the constitution

of the products from acetylacetone and dibenzoylmethane, because the possibility of loss of an acyl residue exists and has not been experimentally disproved."

R. ROBINSON.

Dyson Perrins Laboratory,
University of Oxford,
January 23, 1934.

Chlamydonema fuelleborni n. sp.*

ONE male and nine female specimens of the genus *Chlamydonema* were obtained from the stomach of a domestic cat—*Felis catus domesticus*. The measurements were taken when the worms were alive.

The females measure from 30 to 45 mm. in length and 1.67 to 1.78 mm. in breadth. The body is attenuated anteriorly and the posterior end is enveloped by a reduplication of the cuticle which in the females measures 1.35 mm. from the tip of the tail. The cuticle is transversely striated and reflected over the lips. The cervical papillae in the male measuring 30 mm. in length are at a distance of 1.16 mm. from the anterior end (Fig. 1). In all the nine females the

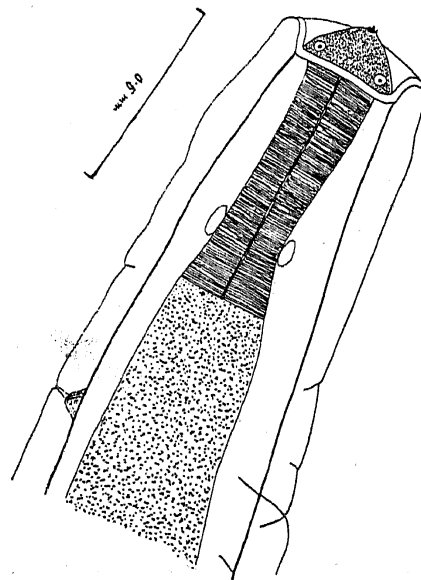


Fig. 1.

Anterior end of male showing the cephalic papilla.

ovula is surrounded by a detachable chitinous ring. In a female 3.5 mm. long, the ovula lies at a distance of 1.15 mm. from

* Species named after the late Geh. Medizinalrat Prof. Dr. Fredrick Fuelleborn, Director, Institut fuer Schiffs-u. Tropenkrankheiten, Hamburg, Germany.