

writer at first sight was inclined to confirm the diagnosis. But the comparative freedom of the ears from nodulation, the fact that the lesions of the arms were on the flexor and not on the extensor surfaces, and the absence from



Figs. 2 and 3. Front and back views of the patient shown in Fig. 1.

the hands and feet of all signs of anaesthesia, which would certainly have been present if this case had been one of leprosy, threw doubt on this diagnosis. Microscopic examination of a smear made from one of the nodules, instead of showing acid-fast bacilli, showed great numbers of *L. donovani*.

As the dermal form of kala-azar yields almost as readily as the visceral form yields to antimony treatment, the unnecessary distress suffered by this patient has provoked the writing of this paper. It is not unlikely that in the endemic areas of kala-azar many other patients are being treated for leprosy, or suffering, untreated, under its stigma, who might be relieved and rapidly cured if a correct diagnosis were made.

REFERENCES.

Acton, H. W. and Napier, L. E. (1927). Post-Kala-azar Dermal Leishmaniasis. *Indian Jour. Med. Res.*, Vol. XV, No. 1, p. 97.

Brahmachari, U. N. (1922). A New Form of Cutaneous Leishmaniasis—Dermal Leishmanoid. *Indian Med. Gaz.*, Vol. LVII, No. 4, p. 125.

A NEW CASE OF *BERTIELLA STUDERI** IN A HUMAN BEING.

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A PORTION of a tapeworm was sent by Capt. N. N. Ghosh of Naryanganj for identification. The history was that a boy eight years of age had been passing similar bodies at intervals of a week or so for some time past. The specimen consisted 14 segments of a tapeworm and it was 8 mm. in length and 10 mm. in breadth. It was fully gravid and all organs except the uterus, loaded with eggs, had disappeared. Eggs removed from the specimen had the appearance of the eggs of *Bertiella studeri* and their dimensions corresponded with those given by Chandler (1925) for the eggs of this species.

At the request of the writer Capt. Ghosh treated the patient with Ext. Filix Mas and almost the complete worm was recovered. It measured 28.9 cm. in length, and the posterior 4 cm. were 14 mm. in breadth. The head was not found in the bottle in which it was forwarded, but a small piece from the anterior end of the strobila consisting of seventeen segments was detached from the worm, so it is possible that the head was there also, but had been lost.

Mature segments were well extended, being 1.45 mm. in length and 3 mm. in breadth. The dimensions of this part of *B. studeri* given by Faust (1929) are 0.075 mm. in length and 6 mm. in breadth. At first sight these measurements appear very different, but any one who has observed a living tapeworm must be familiar with the great alterations in shape that these worms are able to produce in themselves by alternate contraction and relaxation of the transverse and longitudinal muscle fibres, so that length and breadth of segments alone are very unreliable as a diagnostic character. If the surface area of the mature segments of the writer's specimen are worked out by multiplying the length by the breadth it gives a figure of 4.35 square millimetres, and if Faust's measurements are treated in the same way an area of 4.5 square millimetres is obtained, dimensions which are closely comparable. From this observation it is suggested that possibly a more reliable guide in the diagnosis of Cestodes would be to give the surface area of a segment in square millimetres instead of its length and breadth.

On account of the longitudinal extension of the worm the sexual organs have a slightly different appearance from that figured for *B. studeri*, where the marked lateral extension and consequent longitudinal shortening of the segments compresses the ovaries laterally and shortens them antero-posteriorly. But if

* Baylis (1929) gives *B. satyri* as a synonym of *B. studeri*, and the writer has followed this nomenclature in the present paper.



Fig. 1. Photograph of worm. $\times 4$.

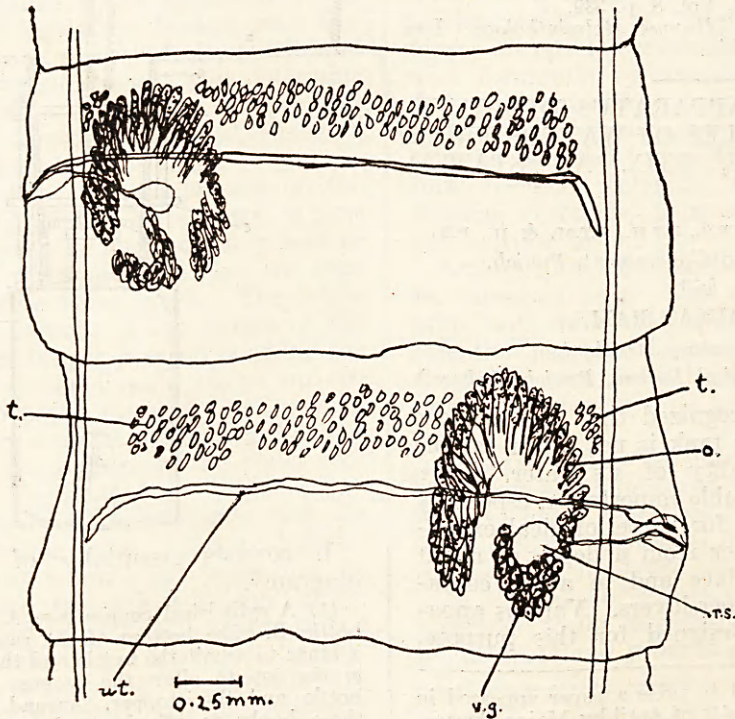


Fig. 2. Mature segments. *o*, ovary, *r. s.* receptaculum seminis, *t.* testes, *ut.* uterus, *v. g.* vitelline gland

allowance is made for the more extended condition of the writer's material these organs have the characters of *B. studeri*. The testes are approximately the same number, and the vagina, cirrus pouch and vas deferens appear the same. A further point of similarity is that the gravid segments are identical and the eggs are the same size as in *B. studeri*. Therefore, although the head was not obtained, it is considered there is little doubt that the writer's specimen is one of *B. studeri*.

Two previous records of this species of worm from human beings are in existence.* The first is by Blanchard (1913) who obtained a specimen from a girl aged eight years at Port Louis, Mauritius, and the second record is by Chandler (1925) who obtained his specimen from a female Hindu child aged two years in Bengal. It is of interest that all three records are from young children. The only other record of a member of this genus being found in a human being is that of Cram (1928) who identified a worm as *B. mucronata*, which had been passed by a young Spaniard in Cuba.

REFERENCES.

Baylis, H. A. (1929). *A Manual of Helminthology, Medical and Veterinary*. Baillière, Tindall and Cox, London.

Blanchard, R. (1913). *Bertiella satyri*, de l'Orang-outang est aussi parasite de l'homme. *Bull. Acad. Méd.*, Vol. 69, p. 286. (Rev. *Trop. Dis. Bull.*, Vol. 2, p. 408.)

Chandler, Asa C. (1925). New Record of *Bertiella satyri* (Cestoda) in Man and Apes. *Parasitol.*, Vol. 17, p. 421.

Cram, Eloise B. (1928). A species of the Cestode Genus *Bertiella* in Man and the Chimpanzee in Cuba. *Am. Journ. Trop. Med.*, Vol. 8, p. 339.

Faust, E. C. (1929). *Human Helminthology*. Lea and Febiger, Philadelphia.

A NOTE ON AN APPARATUS DESIGNED TO TAKE SAMPLES OF WATERS FROM WELLS, TANKS, ETC., AT STATED DEPTHS.

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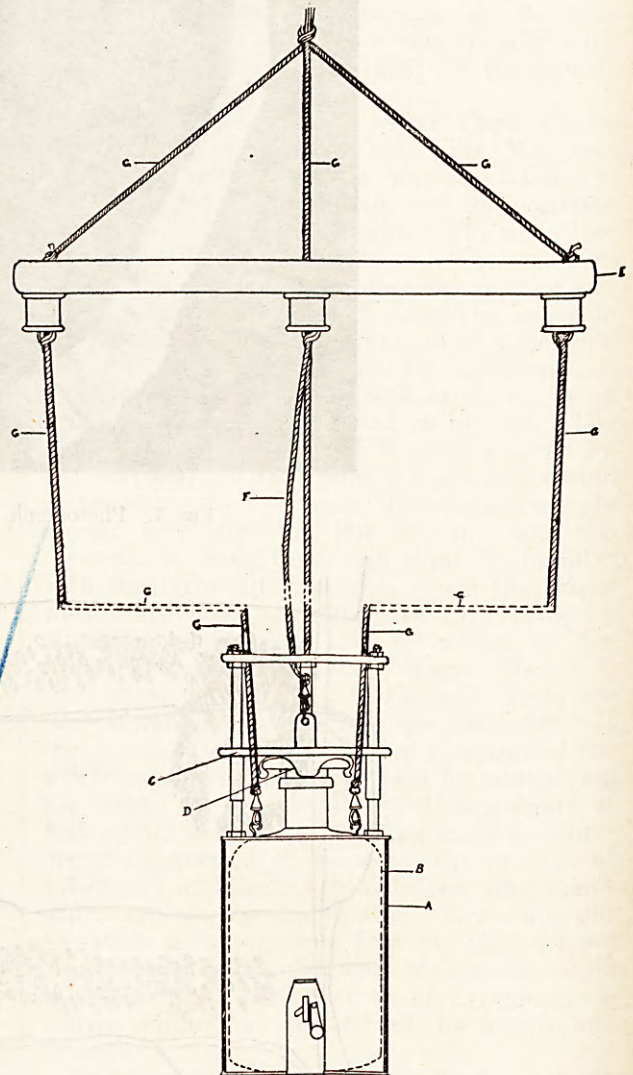
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It is generally recognized that the surface water from a well or tank is not a fair sample of the average quality of its water. It is, therefore, of considerable importance, especially when taking samples for bacteriological examination to obtain water from a depth of about 3 feet from the surface and to avoid contamination from the upper layers. Various apparatuses have been designed for this purpose,

some of which require evacuated sealed flasks, while others involve complicated rubber connections and are, therefore, not suited for general use in this country. Moreover, in almost all the apparatuses described in the text-books, there is no arrangement to close the opening through which the water enters the bottle or the flask when it is withdrawn, and there is no absolute surety of the container getting completely filled at the required depth. There is, therefore, a certain amount of risk of contamination from the surface water when the apparatus is withdrawn.

A simple apparatus has been designed for this purpose and is described below.



It consists essentially of four parts (see diagram).

(1) A cylindrical copper case A for the body of the bottle B. The bottom of the case can be opened on a hinge to admit the bottle and there is a circular hole in the top to allow the passage of the neck of the bottle and the stopper. Around the hole there are three hooks to afford attachment to the three suspending cords and in between them are fixed vertically three metal bars each about 3 inches long which could be joined together by means of a triangular piece.

* After this paper went to press a paper appeared in *The Indian Medical Gazette* of April by Major Sharma, I.M.S., in which he records the finding of the eggs of *Bertiella satyri* in three out of 503 people examined at Shillong.—Ed., *I.M.G.*