

ON A NEW TREMATODE PARASITE FROM A COMMON SNAKE, *NATRIX STOLATA* (LINN.)

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ABSTRACT

A new species *Ommatobrephus bengalensis* from a common snake *Natrix stolata* (Linn.) has been described. *O. lobatum najii* Mehra, 1931, *O. nicolli* Gupta, 1954 and *O. chauhani* Dwivedi, 1967 are considered synonyms to *O. lobatum* Mehra, 1928. A key to the valid species of the genus *Ommatobrephus* Nicoll, 1914 is also given.

DURING the survey of the helminth parasites of snakes of Calcutta and its suburbs we collected a single specimen belonging to the genus *Ommatobrephus* Nicoll, 1914 from the digestive tract of *Natrix stolata* (Linn.). On study this parasite has been found to be a new species.

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Ommatobrephus bengalensis n. sp.

The thin and small parasite measures 1.91 mm. in length. It is conical in shape with tapering anterior and broad, rounded posterior end. The maximum breadth 0.81 mm. is noticed a little anterior to ovary.

The small oral sucker is situated at the anterior end of body and measures 0.10 mm. in length and 0.12 mm. in breadth. The ventral sucker is oval and measures 0.35 mm. in length and 0.23 mm. in breadth. The ratio of the length of the oral sucker and the ventral sucker is 1:3 and that of the breadth is 1:2.

The distinct muscular pharynx measures 0.08 mm. in length and 0.12 mm. in breadth. There is a small prepharynx. The long and narrow oesophagus measures 0.31 mm. in length and 0.06 mm. in breadth. It

bifurcates much anterior to the ventral sucker into two long caeca, terminating near the middle region of the testes.

Testes oblong, entire, symmetrical, situated at the posterior end of the body and separated from each other by the loops of the uterus. The right testis is longer than the left and measures 0.44×0.12 mm. and the left testis measures 0.33×0.12 mm. The oval cirrus sac is situated between the space of the ventral sucker and oesophageal bifurcation and it measures 0.23 mm. in length and 0.10 mm. in breadth. The genital pore is situated ventral to oesophageal bifurcation. The thin-walled receptaculum seminis is situated in anterior level and between the testes.

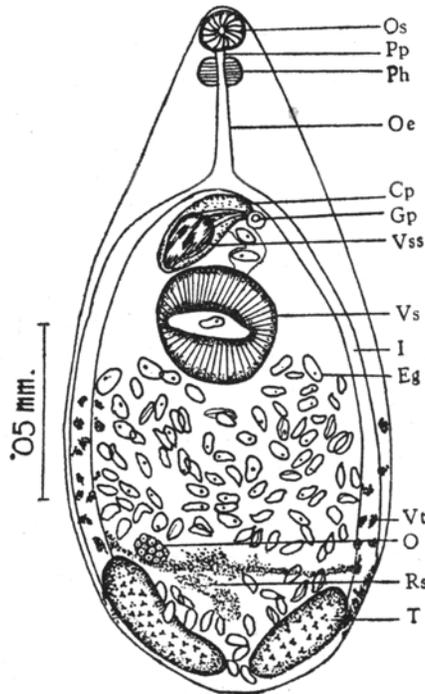


FIG. 1

The almost round small ovary is situated in front of the right testis and measures 0.10 mm. in diameter. The indistinct follicles of the shell gland are situated near the left side of the ovary.

The vitelline follicles are lateral and mostly overlap the caeca. They extend from the posterior level of the ventral sucker to the caecal ends.

The voluminous uterus occupies the major portion of the broad posterior part of the body and extends behind the ventral sucker to the posterior

end of the testes. The metraterm lies ventral to acetabulum and joins the genital atrium. The operculated eggs measure $0.08-0.09 \times 0.04-0.05$ mm. in size. Each egg contains a well-developed miracidium with distinct eye spot in some of them.

DISCUSSION

The genus *Ommatobrephus* Nicoll, 1914 contains only a few species and most of them have been reported from India. Simha (1958) considered *O. nicolli* Gupta, 1954 as synonym of *O. lobatum* Mehra, 1928 and we have also retained this position. Mehra (1931) described a new variety *O. lobatum nejii* and Yamaguti (1958) raised it to the rank of a species. Agrawal (1966) considered it to be a synonym of *O. lobatum* Mehra, 1928. The present authors support the view expressed by Agrawal (1966).

The other recently described species *O. chauhani* Dwivedi, 1967 differs from *O. lobatum* Mehra, 1928 mainly on the arrangement of vitelline follicles. He described the arrangement of vitelline follicles in bunches in his specimens. On restudying the original specimens described as *O. folium* (Syn. of *O. lobatum* Mehra, 1928) by Thapar and Ali, 1929 the present authors find that the vitelline follicles are arranged in groups at places as also pointed out by Mehra (1931). The other differences in Dwivedi's species are of minor nature and cannot be given much specific value. It is, therefore, proposed that *O. chauhani* Dwivedi, 1967 may be treated as synonym of *O. lobatum* Mehra, 1928.

Bhalerao (1936) noticed the unlobed nature of the testes in some of his specimens and suggested that this can be considered as a variety of *O. lobatum* Mehra, 1928 and refused to give it a specific rank because he failed to detect any other differences. The present species differs from *O. lobatum* Mehra, 1928 not only in the structure of testes but also in the size of the oral sucker and ventral sucker, size of the oesophagus, position of genital opening, structure and position of the recepticulum seminis and size and position of the ovary. It differs from *O. singularis* Nicoll, 1914 in the shape of body, extension of caeca, arrangement and size of testes and extension of the vitelline follicles. It differs from *O. megacetabulus* Simha, 1958 in the extension of caeca, structure of testes and size of ventral sucker.

Host.—*Natrix stolata* (Linn.).

Location.—Small intestine.

Locality.—Bhasna (West Bengal).

Type.—Holotype has been deposited in the National Zoological Collection at Zoological Survey of India, Calcutta. (W6686/1—on slide).

KEY TO SPECIES OF THE GENUS *Ommatobrephus* NICOLL, 1914

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|---|-------------------------|
| 1. Caeca short reaching about middle of body | 2 |
| Caeca long reaching about middle level of testes located near posterior end of body | 3 |
| 2. Testes smooth, ventral sucker small | <i>O. singularis</i> |
| Testes not smooth, ventral sucker large | <i>O. megacetabulus</i> |
| 3. Testes lobed | <i>O. lobatum</i> |
| Testes unlobed | <i>O. bengalensis</i> |

REFERENCES

- Agrawal, V. .. "Studies on some reptilian trematodes from Lucknow," *Indian J. Helm.*, 1966, **18**, 62-67.
- Bhalerao, G. D. .. "Studies on the helminth of India, Trematoda—II," *J. Helm.*, 1936, **14**, 181-206.
- Dwivedi, M. P. .. "On a new species of the genus *Ommatobrephus* Nicoll (1914)," *Indian J. Helm.*, 1967, **19**, 15-22.
- Gupta, N. K. .. "On a new species of the genus *Ommatobrephus* Nicoll (1914) from the intestine of *Natrix piscator* in Ludhiana," *Res. Bull. Punjab. Univ.*, 1954, **54**, 121-23.
- Mehra, H. R. .. "Two distome trematodes from Indian reptiles," *Allahabad Univ. Stud. 7, Sci. Sect.*, 1931, 31-52.
- Nicoll, W. .. "Trematode parasites from the animals dying in the Zoological Society's Gardens during 1911-12," *Proc. Zool. Soc. London*, 1914, **1**, 139-54.
- *Simha, S. S. .. "Studies on the trematode parasites of reptiles found in Hyderabad State," *Ztschr. Parasitenk.*, 1958, **18**, 161-218.
- Skrjabin, K. I. ... "Trematodi zhivotnikh iceloveka," *Akademiï Nayk. S.S.S.R.*, 1960, **18**, 733-42.
- Thapar, G. S. and Ali, F. .. "On the trematodes of the digestive tract of *Tropidonotus piscator* from Lucknow," *J. Helm.*, 1929, **7**, 247-52.
- Yamaguti, S. .. "Systema Helminthum," *Interscience*, N.Y.—1, 1958 (1 and 2),

* Original not consulted.

ABBREVIATIONS

<i>Cp.</i> , Cirrus pouch.	<i>Ph.</i> , Pharynx.
<i>Eg.</i> , Egg.	<i>Pp.</i> , Prepharynx.
<i>Gp.</i> , Genital pore.	<i>Rs.</i> , Recepticulum seminis.
<i>I.</i> , Intestine.	<i>T.</i> , Testes.
<i>O.</i> , Ovary.	<i>Vs.</i> , Ventral sucker.
<i>Oe.</i> , Oesophagus.	<i>Vss.</i> , Vesicula seminalis.
<i>Os.</i> , Oral sucker.	<i>Vt.</i> , Vitellaria.