Rev. Biol. Trop., 13(2): 213-217, 1965

Observations on the systematic position of the genus Gaigeria Railliet & Henry, 1910 (subfamily Necatorinae Lane, 1907: family Ancylostomidae Lane, 1907: Nematoda).

by

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(Received for publication July 19, 1965)

The genus *Gaigeria* has enjoyed the status of a recognised and well defined nematode genus since it was so established by RAILLIET and HENRY in 1910 (6). Recently, however, CAMERON (2) has referred to it as a synonym of the genus *Bunostomum* Railliet, 1902 (5). The writer, while engaged in a survey of the nematode parasites of vertebrates of Rajasthan, India, was able to collect *Gaigeria pachyscelis* Railliet & Henry, 1910 and *Bunostomum trigonocephalum* (Rud., 1808) Railliet, 1902, the type species of the genera *Gaigeria* and *Bunostomum* respectively and, after a detailed examination, has come to the conclusion that the two exhibit many fundamental differences and, therefore, should not be regarded as synonyms.

Gaigeria pachyscelis Railliet & Henry, 1910

(Figs. 1 and 3)

Gaigeria pachyscelis appears to be a common parasite of goats at Jodhpur. The female measures 17-25 mm in length and 0.65-0.75 mm in maximum thickness, the male 14-17 mm and 0.5-0.6 mm respectively. The anterior end is bent dorsally. There is a large, globular buccal capsule. A pair of ventral cutting plates guard the oval mouth-opening. The dorsal cone is short and sharp. A pair of subventral lancets is present. The bursa of the male has a well developed, symmetrical dorsal lobe. The dorsal lobe is much larger than the two lateral

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lobes which are joined ventrally. The two equal spicules measure about 1.31 mm and are slender with their pointed tips recurved.

Bunostomum trigonocephalum (Rud., 1808) Railliet, 1902

(Figs. 2 and 4)

Bunostomum trigonocephalum was collected at Bikaner and appears to be generally confined to sheep in Western Rajasthan. The female measures 15-26 mm in length and 0.5-0.75 mm in maximum thickness and the male 11-16 mm and 0.4-0.45 mm respectively. The anterior end is bent dorsally. The buccal capsule is large and infundibular having two ventral cutting plates. The dorsal cone is well developed and comparatively long. A pair of subventral lancets is present. The bursa of the male has a poorly developed, asymmetrical dorsal lobe which is smaller than the two lateral lobes. The latter are continuous ventrally. The two spicules are equal and measure about 0.7 mm. They are somewhat twisted but never recurved. The spicules terminate in a rather blunt point.

DISCUSSION

YORKE and MAPLESTONE (8), BAYLIS (1), ORTLEPP (4) and SKRJABIN (7) have all treated *Gaigeria* and *Bunostomum* as two separate genera, distinct from each other. CAMERON (3) while synonymizing the two genera and transferring *Gaigeria pachyscelis* to *Bunostomum* as a distinct species, *Bunostomum pachyscelis*, has offered no reason for this change except that a slightly asymmetrical dorsal lobe is found in *Gaigeria pachyscelis* — a fact not confirmed by other workers. YORKE and MAPLESTONE (1.c.), BAYLIS (1.c.) and SKRJABIN (1.c.) described the dorsal lobe in *Gaigeria pachyscelis* as symmetrical and the author is in accord with this view. Allowing even for some variation in the symmetry of the dorsal lobe, it is to be noted that the symmetry of the dorsal lobe is not the only character which distinguishes the genus *Gaigeria* from the genus *Bunostomum*. The relative lengths of the dorsal and the lateral lobes provide an equally important point of difference between the two genera. This difference has not been, so far, sufficiently stressed. As would be evident from the brief descriptions of the type species of the two genera, the dorsal lobe in *Gaigeria* is much larger than the lateral lobes, while in *Bunostomum* it is much smaller. Incidentally, SKRJABIN (1.c.), in his key to the genera of the subfamily Bunostominae (= Necatorinae), mentions, probably due to oversight, that in *Gaigeria* the dorsal lobe is equal to the lateral lobes. In the generic diagnosis, however, he states clearly that in *Gaigeria* "bursa consists of very large dorsal and smaller lateral lobes".

The form and the shape of the spicules may well serve as a subsidiary generic character since in *Gaigeria* the spicules terminate in fine points and their tips are recurved while in *Bunostomum* the tips of the spicules are neither pointed nor recurved. In the females, the development of the dorsal cone in the buccal

capsule, although of minor importance by itself, may be of some help in differentiating the two genera from each other. The dorsal cone in *Gaigeria* is short while in *Bunostomum* it is well developed. Besides this there seems to be no other character in female to distinguish one from the other.

Thus it is clear that, on the basis of the form and the length of the dorsal lobe of the bursa and the shape and the form of the spicules, the Genus *Gaigeria* Railliet & Henry, 1910 should not be treated as a synonym of the Genus *Bunostomum* Railliet, 1902 but as a separate and distinct genus.

ACKNOWLEDGEMENTS

The author is thankful to the Council of Scientific and Industrial Research, New Delhi, for a Fellowship to study the nematode parasites of vertebrates of Rajasthan. Thanks are also due to Dr. S. Khera for his criticism and suggestions.

SUMMARY

On the basis of the form and length of the dorsal lobe of the bursa and the shape of the spicules, as observed in *Gaigeria pachyscelis* and *Bunostomum trigonocephalum*, both genera are considered distinct and separate, and the former not a synonym of the latter.

RESUMEN

Basándose en la forma y tamaño del lóbulo dorsal de la bolsa y en la forma de las espículas en *Gaigeria pachyscelis* y *Bunostomum trigonocephalum*, el autor opina que estos dos géneros no deben considerarse sinónimos.

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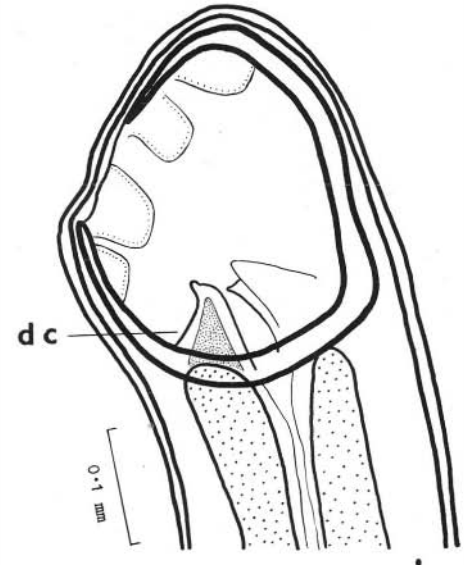
Fig. 1. *Gaigeria pachyscelis:* anterior extremity, lateral view. dc.: dorsal cone.

Fig. 2. *Bunostomum trigonocephalum:* anterior extremity, lateral view.

Fig. 3. *Gaigeria pachyscelis:* posterior extremity of male, ventral view. dl.: dorsal lobe; ll.: lateral lobe; sp.: spicules.

Fig. 4. *Bunostomum trigonocephalum:* posterior extremity of male, dorsal view.



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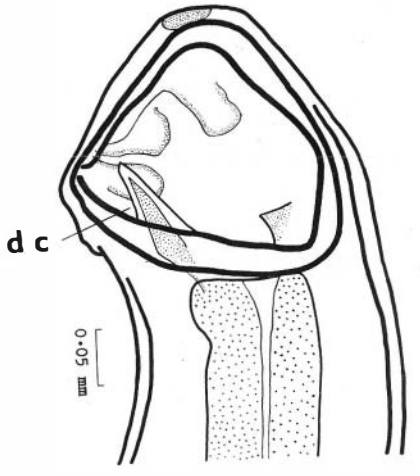

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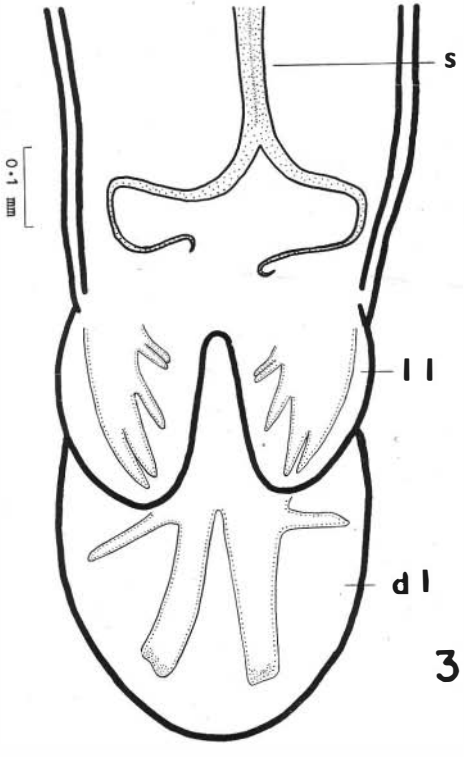

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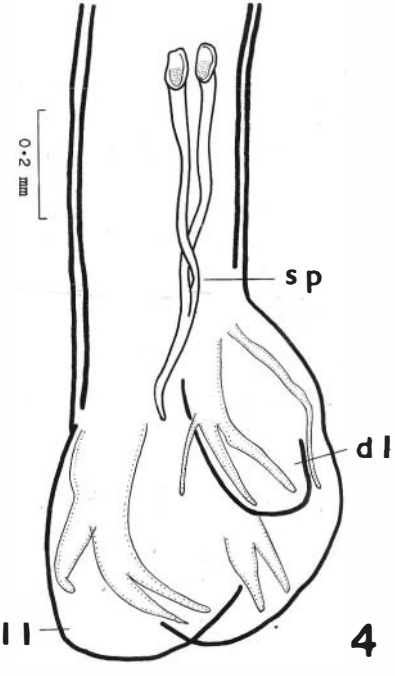

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