

On some nematodes belonging to the genus *Rictularia* (Nematoda: Spiruroidea)

by

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A few nematodes belonging to the genus *Rictularia* Froelich, 1802 were collected from *Rattus rattus*, *Funambulus pennanti* and *Felis domesticus* during February 1965 at Jodhpur, India. It is believed that the form recovered from rat represents *Rictularia ratti* Khera, 1954, while those from cat *R. cabirensis* Jaegerskiöld, 1904, although both show differences from the original descriptions of these species. The male from squirrel could not be identified with any of the known species but due to lack of females and more males it has been thought desirable not to assign any specific status to it.

Rictularia ratti Khera, 1954

(Figs. 1, 2, 3, 4 and 5)

One female, recovered from *Rattus rattus*, is considered to be *Rictularia ratti* Khera, 1954. There are, however, certain interesting differences between the two which are given in Table 1.

The specific diagnosis of the various species of the genus *Rictularia* rests, as pointed out by DOLLFUS and DESPORTES (4), TYNER (8) and DOLLFUS (3), primarily on the position of the oral opening and the number of combs or spines, particularly the prevulvar ones. In both *R. ratti* as well as the present form the oral opening is inclined dorsally and the number of the prevulvar combs is 40. A slight variation is, however, noticeable in the lengths of the entire worm and the tail, positions of the vulva and the nerve ring and size of the eggs. It is also interesting to note that KHERA (5) described *R. ratti* from *Rattus norvegicus* while the specimen under discussion was collected from *Rattus rattus*, thus adding a new host for the species.

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TABLE 1
(All measurements are in millimeters)

	<i>Rictularia ratti</i> Khera, 1954	Author's specimen
Length	65—70	55
Maximum thickness	0.95—1.2	1
Combs: Total	57	58
Prevulvar	40	40
Postvulvar	17	18
Buccal capsule	0.2 × 0.18	0.107 × 0.04
Esophagus: Total length	6-6.2	4.12
Narrow part	—	0.99
Wider part	—	3.13
Tail	0.43	0.56
Nerve ring	0.75	1.14
Vulva (from anterior end)	5.8—6	3.84
Eggs	0.038—0.042	0.021 × 0.021

Rictularia cabirensis Jaegerskiöld, 1904

(Figs. 6, 7, 8, 9 and 10)

Two females, collected from *Felis domesticus*, in spite of certain differences (Table 2), appear to represent *Rictularia cabirensis* Jaegerskiöld, 1904.

TABLE 2
(All measurements are in millimeters)

	<i>Rictularia cabirensis</i> Jaegerskiöld, 1904	Author's specimens
Length	8.8—19.6	14—15
Maximum thickness	9.24—0.46	0.2—0.25
Combs: Total	126—135	140
Prevulvar	46—52	50
Postvulvar	78—87	89
At level with vulva	—	1
Buccal capsule	—	0.045 × 0.035
Esophagus: Total length	2—3.71	2.975
Narrow part	—	0.41
Wider part	—	2.565
Tail	{6 times}	{6.25 times}
Nerve ring	0.14—0.2	0.24
	(in middle of narrow portion)	(behind narrow portion)
Vulva (from anterior end)	2.2—3.9	3.385
Eggs	0.039—0.043	0.037 × 0.024
	×	
Dorsal ala	0.026—0.034	
	present	absent

In *Rictularia cabirensis* as also in the author's specimens the inclination of the oral opening is dorsal and the number of the prevulvar combs is almost identical and the great range in the various measurements for the former covers those for the latter. However, the absence of the dorsal ala, position of the nerve ring and the size of the eggs in the specimens under discussion present slight difference from the description given by BAYLIS (1) for *R. cabirensis*. This is, incidentally, the first report of *R. cabirensis* from the Rajasthan Desert in India.

Rictularia sp. from *Funambulus pennanti*

(Figs. 11 and 12)

Only one male was collected from the stomach of the common Indian squirrel, *Funambulus pennanti*.

DESCRIPTION (All measurements are in millimeters):

Length 4.22; maximum thickness 0.25. Cuticular striations well pronounced, 0.007—0.008 apart. Lateral and caudal alae absent. Oral opening inclined dorsally. Combs 58; first pair at 0.057 from anterior extremity, last at 0.51 from tail tip. Buccal capsule 0.03×0.025 ; a row of denticles about 0.003—0.004 long present. Esophagus 1.46; anterior narrow portion 0.343 long, posterior wider part 1.117. Tail 0.108. A circular swelling present on the anterior lip of cloaca. Nerve ring at 0.289 from anterior end. Fans 4; beginning from the posterior extremity, first 0.107×0.029 , second 0.133×0.028 , third 0.09×0.016 and fourth 0.076×0.014 ; thus second is the largest and fourth smallest. Spicule two, unequal; right 0.062, left 0.12 long. Accessory piece 0.015. Papillae 9 pairs, arranged in 3 groups of 3 each; first group precloacal, second postcloacal and third further behind.

DISCUSSION: The specimen described above resembles very much *Rictularia ratti* Khera, 1954. In both the oral opening is inclined dorsally and the number of combs is not much different. KHERA (5) reported 56 pairs of combs on *R. ratti* as compared to 58 on the author's specimen. The latter is, however, much smaller and differs from the former in many details. It has only four fans while *R. ratti* possesses five. Allowing even for some variability in the number of fans, as pointed out by TINER (8) in *Rictularia citelli* McLeod, 1933, (6), the number and arrangement of papillae in the two is quite different. In *R. ratti* there are six pairs of papillae, all postcloacal, while in the author's specimen there are nine pairs arranged in three groups, each comprising three papillae, one of which is precloacal.

Rictularia balli Sandground, 1935, (7), described from gray squirrels, *Sciurus carolinensis leucotis*, and regarded as con-specific with *R. citelli* McLeod, 1933 by TINER (8), possesses a dorsally inclined oral opening and at least two males of *R. citelli* have been reported by TINER (8) to have only four fans,

like the present specimen, though the number varies from six to four. The author's specimen, however, differs from it in having a larger number of combs (34—39 vs. 58).

Rictularia onychomis Cuckler, 1939 (2), recorded, amongst others, from *Sciurus niger*, is reported to have a comb range of 56-64 pairs which would cover the 58 pairs of the specimen under discussion. *R. onychomis*, however, has the oral opening more anterior than dorsal as compared to the distinctly dorsally inclined oral opening in the present specimen.

Thus, although it is not possible to identify the specimen under discussion with any known species of the genus, it is not considered desirable to assign a specific status to it on the basis of a solitary male alone.

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SUMMARY

Rictularia ratti Khera, 1954 is reported, with certain differences from the original description, from *Rattus rattus*, a new host. *Rictularia cabirensis* Jaegerskiöld, 1904, a parasite of *Felis domesticus*, is recorded for the first time from Rajasthan Desert in India. The differences from the original description have been noted. A male *Rictularia* worm, from *Funambulus pennanti*, which could not be identified with any known species of the genus, is described without assigning a specific status due to lack of more material.

Figs. 1-5 *Rictularia ratti* Khera, 1954, female.

Fig. 1. Anterior end.

Fig. 2. Posterior end.

Fig. 3. Vulvar region.

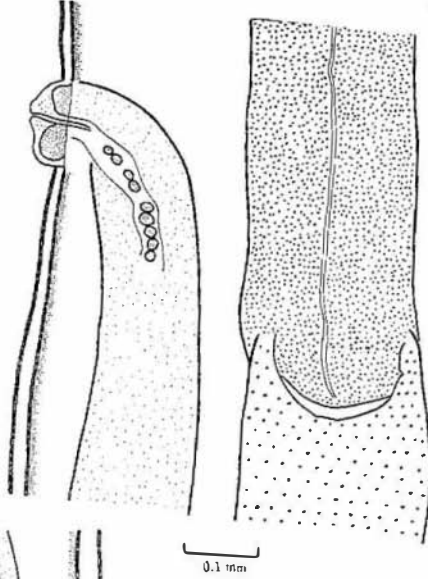
Fig. 4. a. Prevulvar combs.

b. Postvulvar combs.

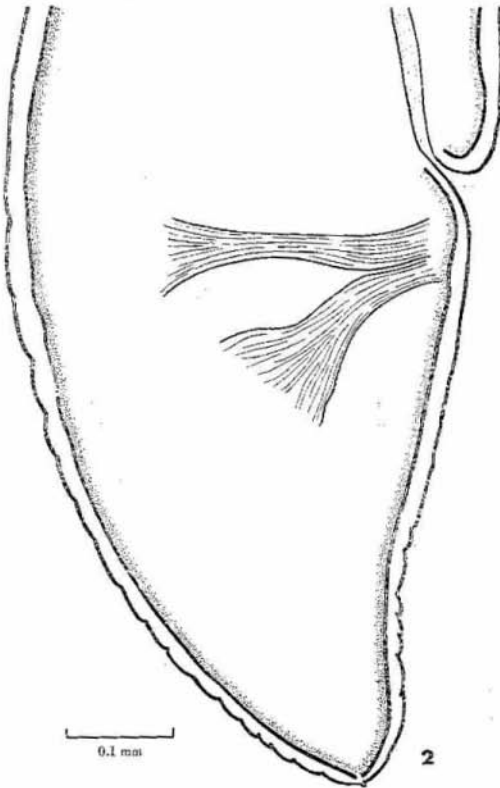
Fig. 5. Eggs.



1



3



2



0.1 mm



4

0.05 mm



5

RESUMEN

Se presenta el informe de varias colecciones de *Rictularia* de la India: *R. ratti* Khera, 1954, de *Rattus rattus*, nuevo huésped, y con ciertas diferencias de la descripción original; *R. cabiriensis* Jaegerskiöld, 1904, de *Felis domesticus*, primer hallazgo de esta especie en el desierto de Rajasthan. Un macho de *Rictularia* de *Funambulus pennanti* se describe sin asignársele a ninguna especie por lo escaso del material.

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Figs. 6-10 *Rictularia cabiriensis* Jaegerskiöld, 1904. female.

Fig. 6. Anterior end.

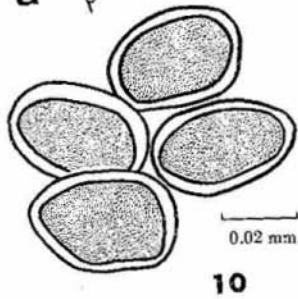
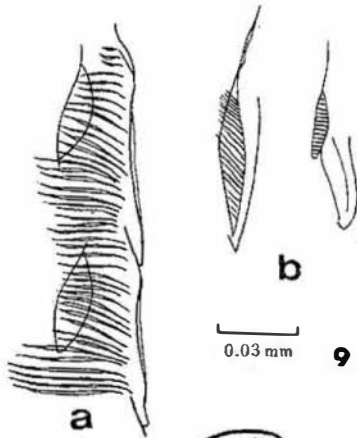
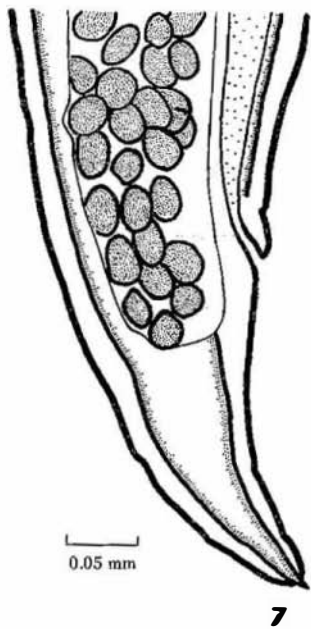
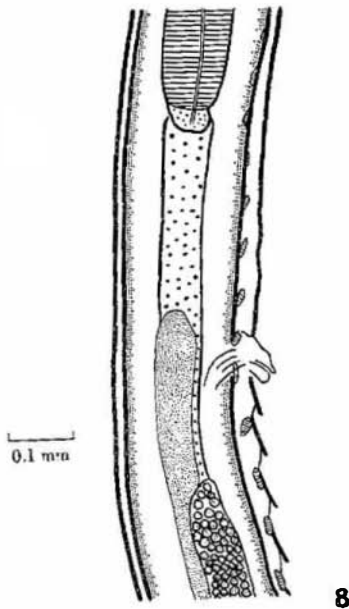
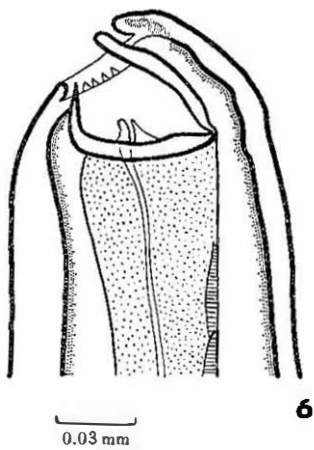
Fig. 7. Posterior end.

Fig. 8. Vulvar region.

Fig. 9. a. Prevulvar combs.

b. Postvulvar combs.

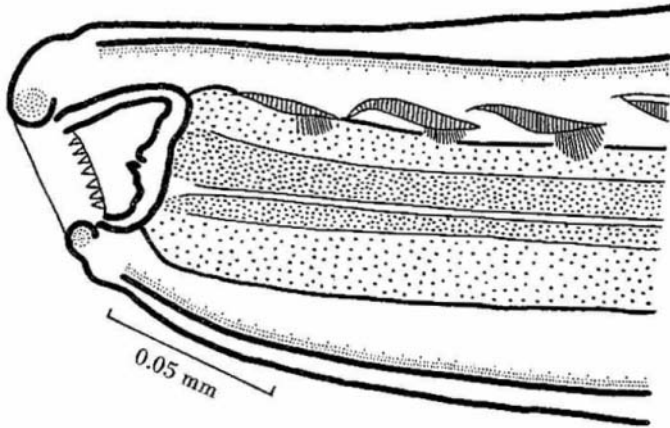
Fig. 10. Eggs.



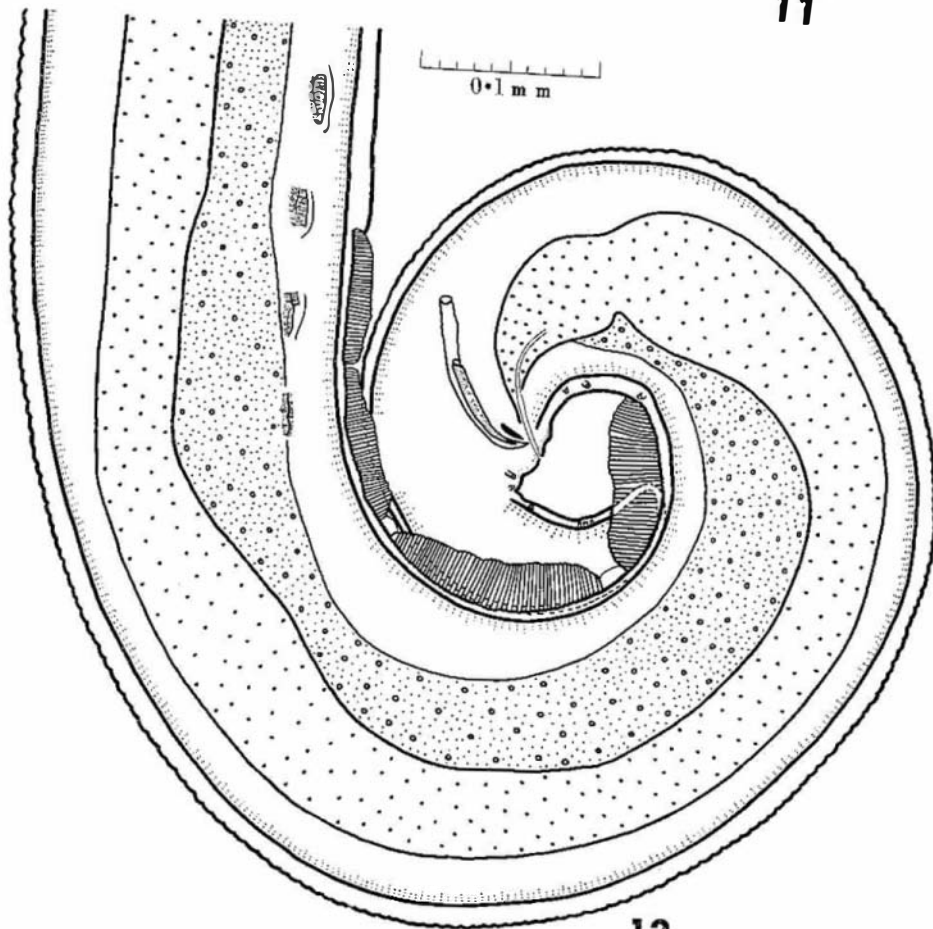
Figs. 11-12. *Rictularia* sp. from *Funambulus pennanti*, male.

Fig. 11. Anterior end.

Fig. 12. Posterior end.



11



12