

Rt. 21-22 ✓

JETIR.ORG

ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue



**JOURNAL OF EMERGING TECHNOLOGIES AND  
INNOVATIVE RESEARCH (JETIR)**

An International Scholarly Open Access, Peer-reviewed, Refereed Journal



# A NEW SPECIES OF THE GENUS *RICTULARIA* (*FROELICH, 1802*) FROM *HERPESTES* *EDWARDSII*

**R. M. KHADAP**

Department of Zoology, Nutan Mahavidyalaya Sailu.  
Dist. Parbhani-431503, M.S. India.  
Email:- rmkhadap@gmail.com

## ABSTRACT

The present communication deal with a new species of the genus *Rictularia* (*froelich, 1802*). The new nematode parasites worm *Rictularia wakiensis n.sp.* is studied from the intestine of the *Herpestes edwardsii* (Mongoose) from Waki Tq. sailu Dist. Parbhani. It is remarkable difference from other known species of the genera *Rictularia* (*froelich, 1802*) the present worm male is small in size while the female are large, on the body two sub ventral rows of well developed comb-like backwardly directed spine are present. Mouth is sub terminal and elongated. The Mouth is surrounded anteriorly by two papillae in the sub median region and one papille on each side in the lateral region. The mouth is encircled by cuticular rim-like structure, which is ornamented with small spine-line structures. The buccal capsule divided in to two portions, esophagus is long. The excretory pore in male is located at the level of seventh comb from the anterior end.

**Key words:** *Herpestes edwardsii*, Nematode Parasites, *Rictularia wakiensis n.sp*

## INTRODUCTION

The one male and two females of the present worm were once collected from the intestine of the mongoose, *Herpestes edwardsii* obtained from Waki Tq. sailu Dist. Parbhani. From the genus *Rictularia* (*froelich, 1802*) described in the species. The total number of sub ventral comb-like spine the number of pre-vulval and post vulval spines and the position in relation to spines, are the characters taken into consideration for differentiation of species. Accordingly the authors have listed these species. The present species number if spines has been the main criterion on which the species are differentiated.

PRINCIPAL  
Nutan Mahavidyalaya  
SELU, Dist. Parbhani



## MATERIAL AND METHOD

The one male and two females of the present worm were once collected from the intestine of the mongoose, *Herpestes edwardsii* obtained from Waki Tq. sailu Dist. Parbhani which was accidentally dead. Nematode parasites were fixed in hot 70% alcohol and preserved in fresh 70% alcohol containing 10% glycerine. The worms were cleared in lacto phenol and mounted in glycerin. Drawings were made with help of the camera lucida and measurements are expressed in millimeters.

## RESULTS

### *Rictularia wakiensis n.sp*

#### Male:

The male is small in size measuring 0.38mm.in length .The maximum width of body is 0.34mm there are 66 pairs of sub ventral comb-like spines. The caudal alae are totally absent: The spicules are similar and sub equal, the right being slightly smaller than the left. The former measures 0.12 mm and the latter is 0.14 mm in length. There are two pairs of sub ventral pre -cloacal papillae one pairs of ad-cloacal papillae and six pairs of post cloacal papillae. All these papillae are sessile.The cloaca is present at a distance of 0.14mm from the tip of the tail. The gubernaculum is very small, horse-shoe shaped and feebly sclerotised.

#### Female:

The female is more than six times longer than male and measures 37.50-43.00mm.in length and 0.56-0.64 mm in maximum body width. The total number of pairs of sub-ventral spines is 89-90 the number of pairs of pre-vulval and post-vulval spines is 43-44 and 46 respectively. The vulva is located almost at the level of the posterior end of oesophagus at a distance of 5.15-5.64 mm from the anterior end. The vagina is directed posterior. The eggs are small and contain embryos at deposition. they measure 0.03-0.04mm.The anus is at 0.22mm from the lip of the tail.

## DISCUSSION

At present worm in having 89-90 pairs of comb-like spines, comes closer to *Rictularia tani*, Hoespli 1929, total number of spine 91-93 pre-vulval spines 41- 42. *R.leiperi* Ortlepp 1961 and *R.myonacis* Ortlepp, 1961 total number of spines 89-91 pre-vulval spine 43-44. It is also differ from all these species in body measurements the position of the vulva ,the oesophagus as well as the other characters exhibited by the posterior end of male .In possessing the vulva at the posterior end of the oesophagus in general body dimensions and in the total number of caudal papillae the present worm come closer to *R.proni*, Seurat, 1915 which is also reported from *Herpestes* sp.but the two species differ markedly in a number of other important characters .Whereas *R.proni* has 42 pairs of sub-ventral comb-like spine the present worm possesses 89-90.The spicules length is the two also differs markedly, 0.06-0.095 mm in *R.proni* as against 0.122-0.14 mm in the worm under discussion. The arrangement of post-cloacal papillae is also different in the two species .While these are evenly spaced in *R.proni* the 3rd and 4th and 5th and 6th are very closely set in the present worm. In view of the differences mentioned above it is felt desirable to erect a new species for their locality.

PRINCIPAL

Nutan Mahavidyalaya  
SELU. Dist. Parbhani

Type species	-	<i>Rictularia wakiensis</i> n.sp
Host	-	Mongoose ( <i>Herpestes edwardsii</i> )
Habit	-	Intestine
Locality	-	Waki Tq.sailu Dist. Parbhani (M.S.) India



### ACKNOWLEDGEMENT

The author are thankful to the Principal Nutan Mahavidyalaya sailu, for providing laboratory facilities.

### REFERENCE

- {1} Arya S.N.1979.A new species of the genus *Rictularia* Froelich 1802 from the domestic cat,*Felis domesticus* .Zeits Agnew Zoo,60:345-348
- {2} Johnson S.1969.A new nematode of the genus *Rictularia* (*Spiruroidea*) from the Indian Gerbil,*Tatera indica*.folia parasit16:371-374.
- {3} Johnson S.1969.On some nematode belonging to the genus *Rectularia* (*Nematoda Spiruroidea*) Rev.Biol.Trop.15:289-297.
- {4} Kalia D.C.and Gupta N.K.1986.On new intestinal nematode (*Rictularioidiea* ,*Rictulariidae*) from *Paguma Irvata* Hamilton Smith) in Himachal Pradesh.Indian J.Helminth 3:103-108
- {5} Lakshmi B.B.and Rao H.K.Shyamasundari K1987.A new species of the genus *Ricularia* from bat *Tapozous longimanus longimanus* from Andhra Pradesh ,India Riv.Parasit.Vol.IVpp.75-80.
- {6} Naidu T.S.and Thakere V.K.1980.On *Rictularia Patwardhani* n.sp. from the intestine of *Megaderama lyra* and *Taphozous melanopogon* of Nagpur ,India Riv.parsit/41:101-104.
- {7} Parihar Aruna and Nama H.S.1977. On three species of the genus of *Rictularia* *Froelich,1802*.(*Nematoda,Rictulariidae*.from *Funambulus pennant*. Nat.Acad. Sci. Latters.1:241-243.
- {8} Yamaguti S. (1961).Systema Helminthum Vol. III The nematodes of vertebrates part I&II. Interscience publishers Ltd. London.


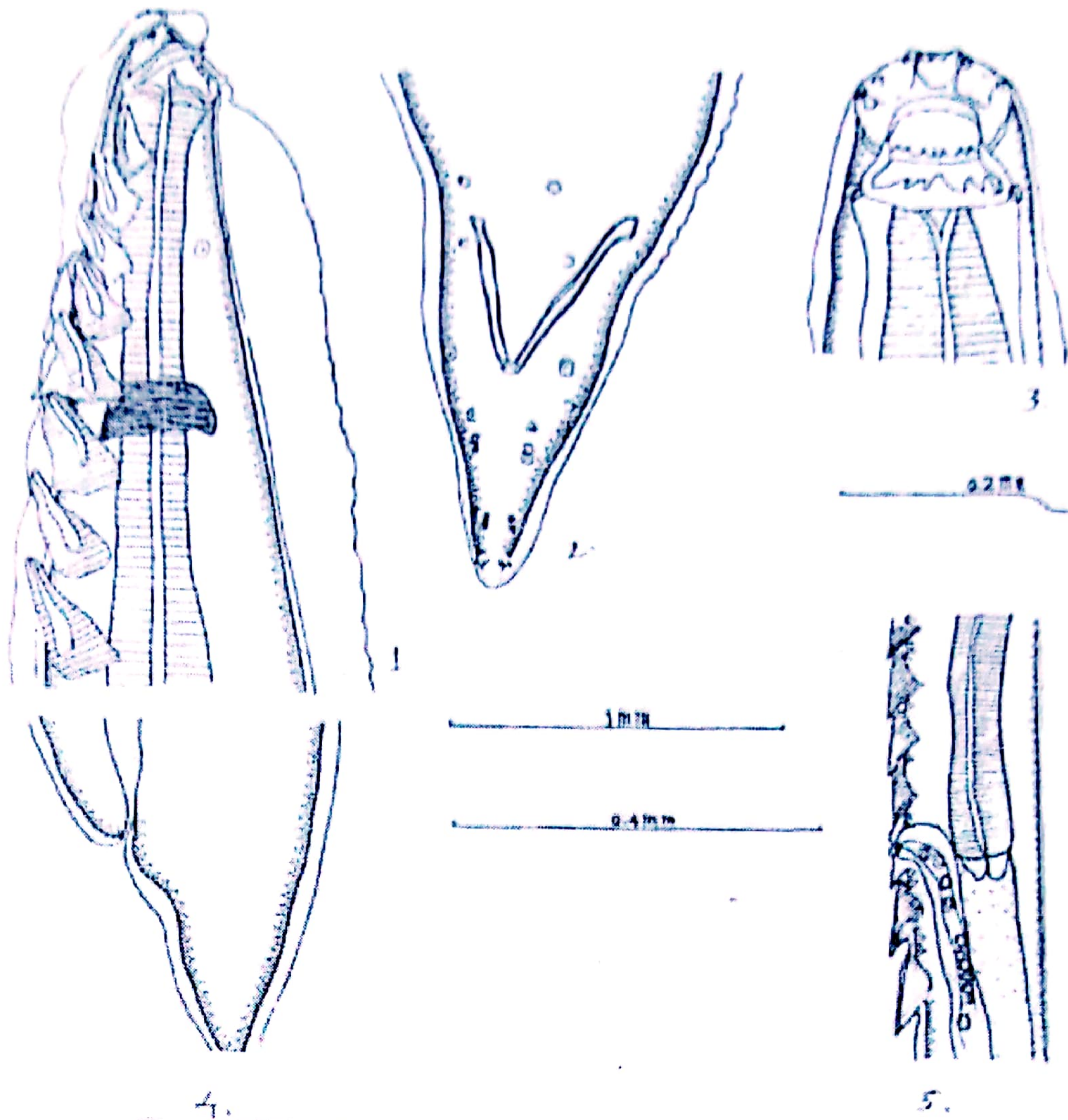
  
PRINCIPAL  
Nutan Mahavidyalaya  
SELU, Dist. Parbhani

Fig-1



*Rictularia wakiensis n.sp*

- 1. Anterior region of male, ventral view
- 2. Male tail Ventral view
- 3. Anterior region of female ventral view
- 4. Female tail lateral view.
- 5. Female Valva Lateral view.

*(Handwritten signature)*

PRINCIPAL  
 Nutan Mahavidyalaya  
 SELU, Dist. Parbhani  
 JALNAR  
 Nutan Mahavidyalaya  
 SELU, Dist. Parbhani