

CHEVREUXIA ROSICKYI SP. N. (NEMATODA: ACUARIIDAE) FROM AN INDIAN BIRD

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Abstract. *Chevreuxia rosickyi* sp. n. is described from the gizzard of eiconiiform bird, *Threskiornis melanocephalus* of India. Host-range, zoogeography and morphometry of the different species of *Chevreuxia* are discussed. A key to the species of the genus has also been furnished. The generic diagnosis is emended.

Thirty male and 38 female worms were recovered on autopsy of 12 *Threskiornis melanocephalus*. Of these, ten harboured these nematodes under their horny layer of the gizzard. Morphological examination disclosed that the parasites are members of the genus *Chevreuxia* Seurat, 1918, but they could not be placed under any of the five known species; therefore they are considered to be a new species described hereunder. (All the measurements are in mm; those in parenthesis indicate measurements of the holotype as regards the male, and the allotype as regards the female).

Chevreuxia rosickyi sp.n.

Host: *Threskiornis melanocephalus* Lath., 1790; **Location:** Under the horny layer of the gizzard; **Locality:** Burdwan, West Bengal, India.

Holotype: one male; **allotype:** one female; **paratypes:** 29 males, 37 females (of these two males and one female have been processed for EM scanning). The holotype and allotype are deposited in the collection of the Zoological Museum, Humboldt University, Berlin; and the paratypes at the Institute of Parasitology, Czechoslovak Academy of Sciences, Prague; and the Parasitology laboratory, Zoology Department, Burdwan University, Burdwan, West Bengal, India.

Description: The worms are white when fresh. The females are longer varying between 10.35 and 19.10 (14.17) and wider 0.178-0.247 (0.198) than the males measuring 6.30-9.25 (8.48) \times 0.135-0.165 (0.158). The cuticle bears fine transverse striae. The mouth is guarded by two lateral lips each bearing a blunt conical process. On ventrolateral view two cephalic papillae are observed. There are four cordons measuring 0.099-0.155 (0.099) in male and 0.138-0.161 (0.151) in female and arise from the base of the conical process of the lips on dorsal and ventral lines. These run caudally and unite on dorsal and ventral sides forming a curve on each side which lies on the collarette. The cordons are flanked on their boarder by a strip of strongly striated cuticle. Each cordon bears both transverse striations and ridges. The latter are arranged transversely

The study was supported by UNESCO and the University of 17th November, Prague.

on the dorsal and ventral sides, longitudinally at the posterior border of the cordon where they inturn to join their mates. Dorsal pair of cordon on joining the ventral pair form a distinct triangle, the point of intersection lies slightly anterior to the proximal margin of the collarette. Transverse or longitudinal ridges of the cordon never bear spike-like processes. Though continuous transverse striations are highly marked in the collarette region on lateral sides, they are discontinuous and wanting in the proximal region of the worms. Two cervical papillae, one on each lateral side, are present at the proximal margin of the collarette. From the posterior margin of the collarette narrow lateral alae arise and run up to the caudal extremity. The mouth leads to a vestibulum measuring $0.125-0.211 \times 0.009-0.016$ (0.145×0.016) in male and $0.158-0.184 \times 0.013-0.026$ (0.165×0.023) in female which in turn ends in a bipartite oesophagus. The muscular part is shorter having a variability of $0.363-0.617$ (0.399) in male and $0.382-0.564$ (0.465) in female and narrower $0.039-0.052$ (0.046) in male and 0.036 to 0.075 (0.042) in female, than the glandular portion which is $2.098-2.541$ (2.303) $\times 0.082-0.115$ (0.099) in male and $2.432-3.201$ (2.640) $\times 0.082-0.115$ (0.115) in female. The nerve ring is located at $0.148-0.214$ (0.161) from anterior end in male and $0.188-0.240$ (0.188) in female.

Male: The tail measures $0.075-0.128$ (0.128) and is spirally coiled. The caudal alae are large, transversely striated, and continuous around the tail tip. There are four pairs of preanal and five pairs of postanal papillae. All caudal papillae are pedunculated. The two spicules are unequal and dissimilar. The left spicule is longer varying from $0.145-0.161$ (0.158), slender but only broad and funnel-shaped proximally. The right spicule is shorter measuring $0.082-0.099$ (0.082), wide and somewhat irregular in shape. Its dorsal side bears three concavities. The distal part of this spicule narrows abruptly when viewed laterally. An accessory piece is found to be wanting.

Female: The posterior part is smoothly conical. The tail short, $0.009-0.023$ (0.016), the anus almost subterminal. On lateral view the anterior lip of the anus appears to be prominent. The vulva, at $0.125-0.207$ (0.198) from posterior end, is very close to the anus. The vagina is highly muscular and directed towards cephalic end. The uteri run parallel. The eggs measure $0.0264-0.0396$ (0.036) $\times 0.0132-0.0198$ (0.019) and are thickshelled, smooth and rectangular in shape.

DISCUSSION

The present nematodes confirm all morphological diagnostic features of the genus *Chevreuxia* except for the localisation of the vulva. Hence, the generic diagnosis is also proposed to be emended. Up-to-date five species have been described under the genus. These are *C. revoluta* (Rudolphi, 1819), *C. australis* Johnston and Mawson, 1941, *C. leiperi* Singh and Ali, 1961, *C. cincta* Ryzhikov, 1962 and *C. americana* Schmidt, 1968. Of these, *C. leiperi* has been recorded from India only (precisely South India: Hyderabad, Deccan). It is evident that the ratio of the vestibulum to cordon length as also the position of the vulva separate these nematodes from the remaining recorded species. Moreover, the nematodes under investigation also possess alae on their lateral sides beginning from the posterior margin of the collarette and extending along the entire body length to the tail tip, a feature hitherto not reported for any of the foregoing species of this genus. The parasites are considered to be new and the name *Chevreuxia rosickyi* sp.n. is proposed to accommodate them. As regards the host-range and zoogeography it can be said that different species of *Chevreuxia* have been recorded from birds belonging to Charadriiformes (Laridae, Recurvirostridae), Passeriformes (Cinclidae) and Ciconiiformes (Threskiornithidae) of sparsely distributed geographical regions. Baruš and Lo-

renzo Hernández (1970) recorded *C. revoluta* from the Neotropical region. Emendation of the generic diagnosis of *Chevreuxia* may be made as: vulva may be in mid-body or close to anus.

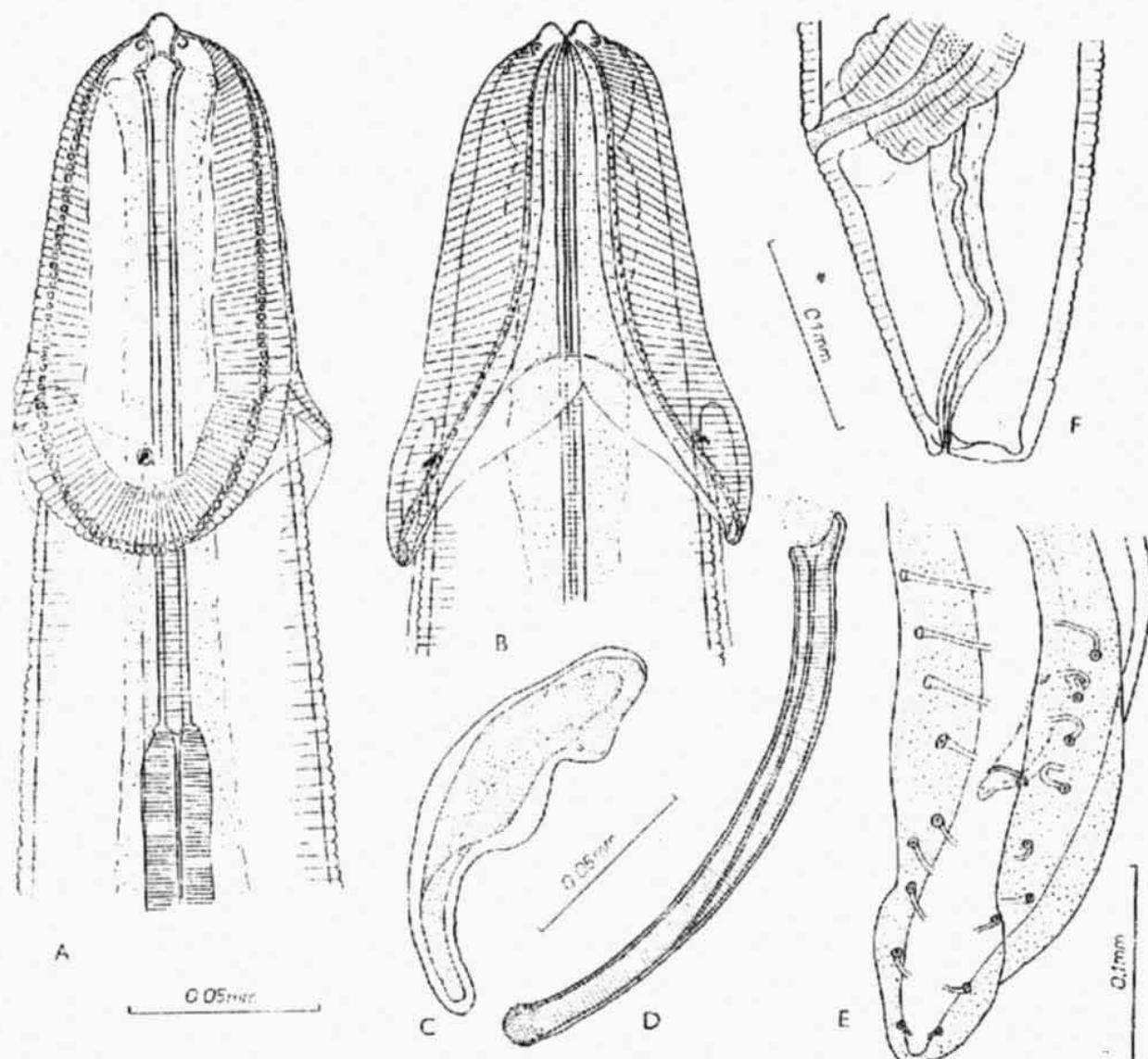


Fig. 1. *Chevreuxia rosickyi* sp. nov. from *Threskiornis melanocephalus*. A — Anterior end of male (lateral view); B — anterior end of female (ventral view); C — right spicule (lateral view); D — left spicule (lateral view); E — posterior end of a male (ventral view); F — posterior end of a female (lateral view).

**KEY TO THE SPECIES OF CHEVREUXIA SEURAT, 1918
(MODIFIED AFTER RYZHIKOV 1962):**

1. Cuticle in between two cordons on dorsal and ventral parts of body with transverse striae *C. australis*
- Cuticle in between two cordons on dorsal and ventral parts of body without transverse striae 2
2. Ratio of vestibulum to length of cordons less than 1 : 2 3
- Ratio of vestibulum to length of cordons more than 1 : 2 4
3. Vulva just posterior to mid-body; six pairs of postanal papillae in male; no lateral flange *C. cincta*

- Vulva very close to anus; five pairs of postanal papillae in male; lateral flange present *C. rosickyi* sp. n.
- 4. Ratio of right to left spicule less than 1 : 5 5
- Ratio of right to left spicule more than 1 : 5 (1 : 7.6). *C. revoluta*
- 5. Oesophagus in male about 20% of total body length; five pairs of postanal papillae in male *C. leiperi*
- Oesophagus in male about 50% of total body length; six pairs of postanal papillae in male *C. americana*

Acknowledgments. Grateful acknowledgment is due to Academician B. Rosický, Director of the Institute of Parasitology, after whom the present species has been named for extending all facilities for the work. Thanks are also due to Corresponding member of the Czechoslovak Academy of Sciences and Head of the Department of Experimental Helminthology, Dr. B. Ryšavý for his encouragements.

**CHEVREUXIA ROSICKYI SP. N. (NEMATODA: ACUARIIDAE)
ОТ ИНДИЙСКОЙ ПТИЦЫ**

В. Баруш и Г. Маджумдар

Резюме. Дано описание нематоды *Chevreuxia rosickyi* sp. n. из мышечного желудка ибиса *Threskiornis melanocephalus* из Индии. В работе обсуждается круг хозяев, зоогеография и морфометрия разных видов нематод относящихся к роду *Chevreuxia*. Также представлен видовой определитель этого рода и исправлен родовой диагноз.

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Received 6 March 1974.

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