



E-ISSN: 2320-7078
P-ISSN: 2349-6800
JEZS 2016; 4(6): 579-581
© 2016 JEZS
Received: 19-09-2016
Accepted: 20-10-2016

Bakhtawar Soomro
Department of Zoology,
University of Sindh, Jamshoro,
Pakistan

GS Ghachal
Department of Zoology,
University of Sindh, Jamshoro,
Pakistan

SM Yusuf
Department of Zoology,
University of Sindh, Jamshoro,
Pakistan

Naeem Narejo
Department of Zoology,
University of Sindh, Jamshoro,
Pakistan

Description of new species *Diplotriaena saheefi* n. sp. (Nematode: Filariidae) from Jungle myna (*Acridotheres fuscus*) Wagler; 1827 (Passeriformes: Sturnidae) in district Larkana, Sindh, Pakistan

Bakhtawar Soomro, GS Ghachal, SM Yusuf and Naeem Narejo

Abstract

A new nematode *D. saheefi* n. sp. is recorded from the body cavity of Jungle myna *Acridotheres fuscus* of District Larkana, Sindh, Pakistan. In all, 30 nematodes (♀) were recorded. Present nematodes reflect diversification from their congeners in the following characters *viz*: body measurement, morphological shape, shape of trident, and shape of esophagus. On the basis of such morpho-metrical changes in this species; *D. saheefi* treated as a new species. This new species is dedicated in the honor and name of younger sister Miss Saheefa Soomro.

Keywords: Avian nematode, *Diplotriaena saheefi* n. sp, Jungle myna, *Acridotheres fuscus*, Sindh, Pakistan

1. Introduction

The Jungle myna *Acridotheres fuscus* belongs to the Class Aves, Order Passeriformes and Family Sturnidae. They are long in size, having grey plumage, darker on the head and wings. There are large white wing patches obvious during flight, and visible white tail tips. The head has a forehead tuft. The bill and strong legs are bright yellow, and there is no bare skin around eye. The southern Indian race has a blue iris. The sexes are similar, but juveniles are browner. They are usually found close to water or rice crop fields. Like most starlings, the Jungle myna is fairly omnivorous, eating fruit, grain and insects etc.

2. Materials and method

During present studies from February to June 2016 a total of 7 Jungle mynas (*Acridotheres fuscus*) Wagler, 1827 were collected from different localities of District Larkana, Sindh, Pakistan and brought to the Parasitological Laboratory Department of Zoology. After anesthetizing, the birds were autopsied and examined for the helminthes parasites. During examination 30 specimens were obtained from the body cavity of the hosts belonging to the Genus *Diplotriaena* Railliet and Henry, 1909. Live specimens were killed in hot 70% ethanol, cleared in lacto phenol, and preserved in alcohol- glycerol solution. Diagrams were made with the help of camera Lucida Garcia and Ash^[1]. Photographs were taken with the help of camera DP12. Measurements were given in millimeters (mm). Specimens were deposited in the Department of Zoology, University of Sindh Jamshoro.

3. Results

3.1 Systematic status

Host: Jungle myna

Parasitic Habitat: Body cavity

Locality: District Larkana, Sindh, Pakistan

No: of hosts examined: 07

No: of hosts infected: 05

No: of specimens recovered: 30

Etymology: The name of new species is dedicated in the honor of my loving younger sister Miss Saheefa Soomro.

Correspondence

Bakhtawar Soomro
Department of Zoology,
University of Sindh, Jamshoro,
Pakistan



Fig 1: Photographic view of Jungle myna *Acridotheres fuscus*



Fig 3.1. Posterior photographic view of nematode, n.sp

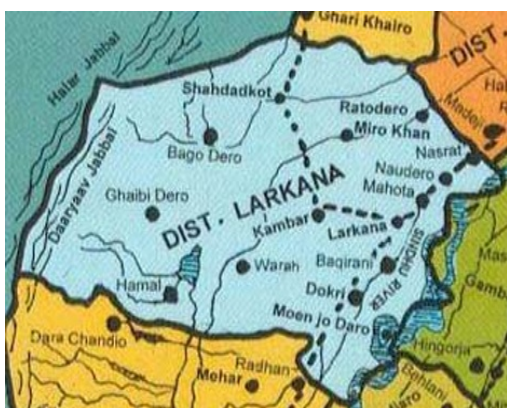


Fig 2: Map of District Larkana where collections of Jungle mynas were made.

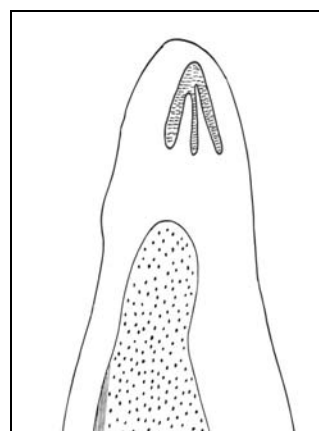


Fig 4: Anterior view of nematode, having scale bar 0.2mm, n.sp

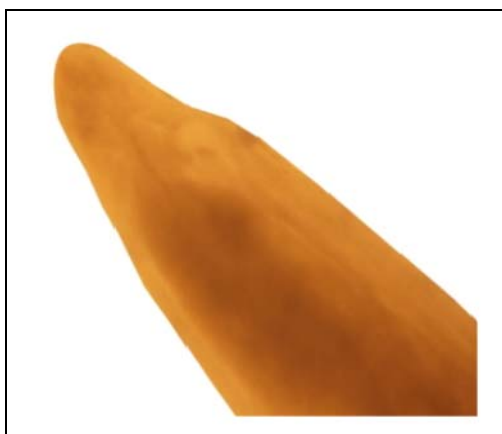


Fig 3: Anterior photographic view of Jungle myna

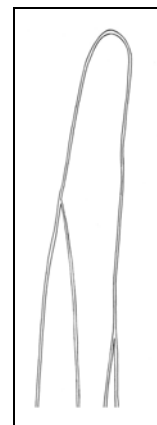


Fig 4.1. Posterior view of nematode, having scale bar 0.2mm, n.sp.

Table 1: Comparative characteristics of various species of Genus *Diplotriaeana* Railliet and Henry, 1909 collected from different avian hosts.

S. No	Parameters	Present species	<i>D. champawatensis</i> Majumdar and Chakravorty, 1963	<i>D. niltavae</i> S. R Dysarkar and Debabrata Sen, 2008	<i>D. sturnopastori</i> Majumdar and Chakravorty, 1963	<i>D. tristisi</i> Majumdar and Chakravorty, 1963
1.	Body length	13.8- 15.5	46.56-56.64	36.0-36.4	92.40-97.21	165-16-170.2
2.	Body width	0.48-0.50	0.75-0.80	0.72-0.80	0.65-0.70	0.54-0.72
3.	Trident	0.12-0.11	0.176-0.240	0.128-0.144	0.10-0.11	0.117
4.	Muscular esophagus	0.20-0.25	ND	ND	0.26-0.38	0.234-0.260
5.	Host	<i>Acridotheres fuscus</i>	<i>Myiophonus caeruleus temmincki</i>	<i>Niltava grandis grandis</i>	<i>Sturnus contra</i>	<i>Acridotheres tristis</i>
6.	Habitat	Body cavity	Body cavity	Abdominal cavity	Body cavity	Body cavity
7.	Locality	Pakistan	India	India	Burden	Burden

ND=not detectable

Measurement of parameters is in millimeters (Table: 1)

3.2. Description

Body of the worm is highly muscular, thick, and elongated. Anteriorly rounded, measuring 0.35-0.28 x 0.25-0.25mm. Trident measuring 0.1-0.07 x 0.120.08. The anterior tip of the trident is pointed. Muscular esophagus measuring 0.65-0.2mm. Posterior elongated with rounded tip respectively.

4. Discussion

Few reported species of Genus *Diplotrriaena* Railliet and Henry, 1909 have worldwide distribution such as; *D. sturnopastori*, *D. tristisi* and *D. molpastisi* Majumdar and Chakravorty, 1963 [2]; *Diplotrriaena* spp, Hassan Borji and Jamshid Razmyar, 2011 [3]; *D. mirzapurensis* Soota and Chaturvedi, 1972 [4]; *D. nagapurensis* and *D. Acridotheri* Gupta and Johri, 1988 [5]. Few reported species from Pakistan viz: *D. nocti* was recorded from *Sturnus roseus* and *Acridotheres ginginianus* Yamaguti. S, 1961 [6]; *D. streptopelia* was recorded from *Streptopelia senegalensis* Bilquees F.M, 1977 [7]; *D. utae* P. L Wong and Roy C, 1983 [8]; *D. andersoni* and *D. lagoposi* O. Wilford Olsen and Clait E. Braun, 1971[9]; *D. champawatensis* and *D. niltavae* S.R. Dysarkar and Debabrata Sen, 2008 [10]; *D. burgusinica* and *D. hamatospiculum* Soota T. D and Chaturvedi. Y, 1972 [11]; *D. tricuspis* Johnston T. Harvey and Mawson P. M, 1941 [12] respectively.

D. sturnopastori Majumdar and Chakravorty [2], recorded in *sturnus contra* of Burden and differs from *D. saheefi* in having larger body length while maximum width of the body; length of trident larger; muscular esophagus larger.

D. tristisi Majumdar and Chakravorty, [2] recorded in *Acridotheres tristis* of Burden and differs from *D. saheefi* in having smaller body length whereas maximum width of the body; length of trident larger; muscular esophagus larger in length and broader in width.

D. molpastisi Majumdar and Chakravorty, [2] recorded in *Acridotheres ginginianus* of Burden and differs from *D. saheefi* in having smaller body length whereas narrower width of the body; length of trident larger and muscular esophagus smaller in length.

D. champawatensis Dysarkar S. R and Debabrata Sen, [10] recorded in *Myiophonus caeruleus temmincki* of India and differs from *D. saheefi* in having smaller body length while maximum width of the body; length of trident larger.

D. niltavae Dysarkar S. R and Debabrata Sen, [10] recorded in *Niltava grandis grandis* of Uttarakhand, India and differs from *D. saheefi* in having smaller body length while broader width of the body; esophagus not traceable due to the heavy deposition of eggs.

D. utae Wong P. L and Roy C, [12] recorded in *Perisoreus canadensis* of Canada and differs from *D. saheefi* in having smaller body length whereas maximum width of the body; length of trident larger and length of muscular esophagus smaller.

D. burgusinica Soota T. D and Chaturvedi Y, [11] recorded in *Turdus ruficollis* of Bhutan and differs from *D. saheefi* in having body length larger while maximum width of the body; length of trident larger and length of muscular esophagus smaller.

D. hamatospiculum Soota T. D and Chaturvedi Y, [11] recorded in *Turdus ruficollis* of Bhutan differs from *D. saheefi* in having body length larger while maximum width of the body; length of trident larger and length of muscular esophagus smaller.

5. Conclusion

Present species reflects disparity from their allies in the following characters viz: body measurement, morphological shape, shape of trident, and shape of esophagus. On the basis of such morphometrical changes this species; *Diplotrriaena saheefi* treated as a new species. This is new addition to the taxonomy.

6. References

- Garcia LA, Ash LR. Diagnostic Parasitology: Clinical Laboratory Manual, the CV Mosby Company. 11830 West line Industrial Drive, St. Louis, Missouri 63141. 1979, 7.
- Majumdar, Chakravorty. taxonomy of the parasites, Burden. 1963, 1-26.
- Borji SR, Razmyar J. Detection of *Diplotrriaena* spp, from the body of *Acridotheres tristis* in Marshhad, Iran, Sci Parasitology. 2011; 12(4):223-225.
- Soota TD, Chaturvedi Y. The nematode fauna of Goa part. 2, Indian. J Helminthol, 1972; 24:22-35.
- Gupta V, Johri S. On some filarid nematode parasites of birds from Lucknow, Indian. J helminthol. 1988; 40:109-120
- Yamaguti S. Systematic helminthum vol.111, nematodes part 1 and 2. Inter science publishers, Inc, New York. 1961, 1261
- Bilquees FM, Jehan N. Helminthes parasites of some birds in Sindh, Pakistan. Pakistan Journal of scientific and industrial research, 1977; 20-26.
- Wrong PL, Roy C. *Diplotrriaena utae* n.sp. (Nematode: Diplotrriaenoidea) in the Gray Jay (*Perisoreus canadensis*) in Ontario, Canada, helminthol. Soc. Wash. 1983; 50(2):275-277.
- Wilford O, Clait E Braun. *Diplotrriaena lagopsi* and *D. andersoni* spp. n. (Diplotrriaenidae: Filiriodea) from White-tailed ptarmigan (*Lagopus leucurus*) in Canada, Proceedings of the helminthological society, 1971; 38(1):86-89
- Dysarkar SR, Debabrata Sen. On four new nematodes species of the Genus *Diplotrriaena* Railliet and Henry, 1909, from Uttarakhand, India, Zoological survey of India, 2008; 108(4):105-112.
- Soota TD, Chaturvedi Y. Systematic studies on some more nematodes from the unarmed collections of the zoological survey of India, zoological survey of India, 1972; 67:121-137.
- Johnston T. Harvey and Mawson P.M. Some parasitic nematodes in the collection of the Australian museum, records of the Australian. 1941; 21(1):9-16.