CONSPICUUM ALYKHANI SP.N. (TREMATODA: DICROCOELIIDAE) FROM *SAXICOLOIDES FULICATA* IN KARACHI, SINDH, PAKISTAN

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Abstract

A new species *Conspicuum alykhani* is proposed belonging to the genus *Conspicuum conspicuum* (Gomes De Faria, J. 1912) Bhalerao, 1936 from the Gall bladder of the bird *Saxicoloides fulicata* in Karachi, Sindh, Pakistan.The new species is characterized by having: Body fusiform, with maximum width posterior to testes. Tegument unspined. Oral sucker smaller than ventral, ventral sucker near middle of body, distant from intestinal bifurcation, Pharynx small, well developed. Esophagus present. Intestinal bifurcation in fo re body. Caeca long, end near posterior extremity. Testes posterolateral to ventral sucker, Cirrus-sac elongate, between pharynx and intestinal bifurcation. Genital pore submedian, anterior to intestinal bifurcation, often at level of pharynx. Ovary submedian, usually just posterior to one testis, uterine coils intercaecal.Vitelline bands of medium length, beginning at the level of acetabulum ending, in posterior half of body. Excretory vesicle Y-shaped, with long stem and rudimentary arms; stem terminates well apart from ovary.

Introduction

Fairly good numbers of species of the genus *Conspicuum* (Bhalerao, 1936) Shtrom, 1940 are known from various countries and variety of hosts all over the globe, but none from Pakistan. This is, therefore, a first and new record of the genus and species *Conspicuum alykhani* from a new host *Saxicoloides fulicata* and new locality i.e. Karachi bird market, Karachi, Pakistan.

Material and Methods

Six specimens of *Saxicoloides fulicata* were purchased from a local bird market in Karachi at random intervals. The birds were autopsied in the laboratory for collection of internal helminth parasites. One out of six birds was found infected with three trematodes. The worms were thoroughly washed in saline solution to get rid of mucus; the trematodes were left in distilled water for few minutes. Later these were fixed in hot alcohol – formalin acetic acid solution where the trematodes expand and die instantly upon striking the hot fixing fluid.

Later the trematodes were gently placed over clean glass slides, pressed lightly with another, tied with thread and placed in F.A.A. solution for twenty four hours. Later the slide specimens were washed with 70% ethanol, stained with Mayer's carmalun, dehydrated in graded alcohol, cleared in clove oil, rinsed with xylene and mounted permanently in preserva slide (mounting medium) Drawings were prepared with the aid of a Camera Lucida; measurements are length by width and in millimeters. Photomicrographs were prepared with the curtsey of Department of Zoology, University of Karachi.

Specimens are deposited in the Helminthological collection of senior author, Department of Zoology, university of Karachi, Karachi, 75270.

***Conspicuum alykhani* sp. n.**
(Figs. 1−4)

Host:	*Saxicoloides fulicata*
Location:	Gall bladder
Locality:	Bird market, Karachi.
No. of hosts examined/ infected:	06/ 01
Number of specimens recovered:	03

Description is based upon three, stained, permanently mounted, egg bearing, mature specimens. Body flattened, fusiform, maximum width attained just in front of the mid body region above the ovary and behind the right testis. Body measuring 4.8−5.4 (5.1) by 2.1−2.2 (2.15). Cuticle smooth throughout from anterior to posterior end. Posterior end more pointed than the anterior end.

Fig. 1

Fig. 2

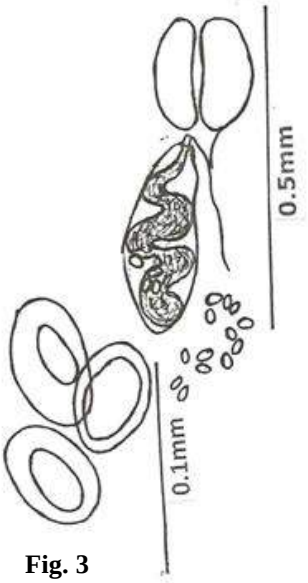

Fig. 3

Fig. 4

Fig. 1. *Conspicuum alykhani* sp. n. entire, holotype, lateral view.
Fig. 2. Cirrus sac of the same, enlarged.
Fig. 3. Eggs of same, enlarged.
Fig. 4. *Conspicuum alykhani* sp. n. Entire, holotype.

Suckers well developed, unequal. Oral sucker smaller than the ventral sucker 0.39−0.40 (0.35) by 0.37−0.38 (0.37). Esophagus 3−4 times as long as pharynx 0.30−0.33 (0.31) long and 0.09−0.10 (0.09) wide.Pharynx small, oval in shape 0.10−0.12 (0.15) by 0.11−0.11 (0.11). Caeca terminate some distance above the posterior extremity. Acetabulum well apart from the anterior extremity 0.51−0.54 (0.52) by 0.5−0.55 (0.52). Distance between oral and ventral sucker is 0.87−0.88 (0.87) while the sucker's ratio is 1: 0.76−0.78 (0.77). The distance of the acetabulum from the caecal bifurcation is 0.31−0.34 (0.32).

Testes symmetrical, oval to rounded in shape .The right testis lie besides the acetabulum while the left testis is situated a little distance beneath the acetabulum, separated one from the other by the uterine coils. The right testis is 0.18−0.20 (0.19) by 0.20−0.24 (0.22). The left testis is 0.12−0.14 (0.13) by 0.20−0.22 (0.21). Distance between the two testes (right and left) is 0.5−0.64 (0.57).

Cirrus pouch small, tubular, plum-shaped contains winding seminal vesicle and prostate complex 0.3−0.32 (0.31) by 0.07−0.08 (0.075) and the cirrus is 0.09−0.1 (0.10) by 0.03−0.04 (0.04). Genital pore is situated above the prebifurcal level, below the pharynx.

Ovary sub-median, post testicular, rounded in shape, slightly larger than the testes, and lie just beneath the left testis 0.24−0.25 (0.24) by 0.23−0.25 (0.24).

Vitelline follicles are small, extend in extracaecal fields along the lateral margins, these commence from the level of the acetabulum in the anterior region and extend as far as some distance above the caecal ends in the posterior region. Uterus occupies more than half portion of the body and fills the entire space up to the pointed posterior extremity of the body. Excretory vesicle tubular; arms bifurcate in front of testes. Eggs are thin shelled, small, oval in shape, 0.058−0.060 (0.059) by 0.039−0.04 (0.039).

Discussion

Present specimens are different from the type species of the genus *Conspicuum conspicuum* (Gomes *et* Faria, 1912) Bhalerao, 1936 mainly in the body shape and size, the testes are rounded to oval in shape and are situated away from the lateral sides, in the middle cortex of the body (Figs. 1 and 4) while testes in *C. conspicuum* are irregular in shape and appear to be situated nearer to the lateral sides of the body and are larger in size than the ovary. The distance between the caecal bifurcation and the acetabulum is comparatively less in present specimens and more in *C. conspicuum.* The ovary is rounded and larger in size then the testes in present specimens, while in *C. conspicuum* the ovary has irregular shape and it is smaller than the testes. The vitelline follicles in *C. conspicuum* commence from the level of the testes while in present specimens these start from the

level of the acetabulum (Figs. 1 and 4) or little above.

The present specimens appear closer to *C. lanceatum* (Shtrom, 1940) Odening, 1964in having similar body shape, but are larger in size, *C. lanceatum* is 3.37 X 1.42 and present specimens are 4.8 5.4 by 2.1−2.2. Ovary in present specimens is slightly larger than the testes while in *C. lanceatum* the ovary is smaller than the testes in size. The distance between the caecal bifurcation and acetabulum is more than that in *C. lanceatum*, the vitelline follicles in *C. lanceatum* commence from the level of testes and end some distance behind the mid body region while the vitelline follicles in present specimens commence from above the level of acetabulum and end some distance above the posterior region of the body and some distance above the caecal ends. Keeping in view the specific differences and a different host and locality present specimens are distinguished from *C. lanceatum*.

Present specimens also differ from *C. pulchrum* (Travassos, 1920); Travassos, 1944 in body shape and size, in having more distance between oral sucker, caecal bifurcation and ventral sucker. The ovary in present specimens is rounded in shape and larger than the testes while in *C. pulchrum* the ovary is oval and transversely elongated lie immediately beneath the right testes; the testes are irregularly oval in shape and lie in the post-acetabular area, nearly touching the acetabulum. The vitelline follicles commence at level of testes in *C. pulchrum* while in present specimens these start from the level of acetabulum.

C. acuminatum (Nicoll, 1915) Travassos, 1944; *C. kalmikense* (Skrjabin *et* Issaitschikoff, 1927) n. comb.; *C. conspicuum* (Gomes de Faria, 1912 Bhalerao, 1936); *C. alectoris* Travassos, 1944 and *C. macrorchis* Denton et Byrd, 1951 are larger in size while the following species are smaller in size than the present specimens; *C.* rarum (Shtrom, 1940) Odening, 1964; *C. Simile* (Shtrom, 1940) Odening, 1964. *C. icteridorum* Denton *et* Byrd, 1951; *C. popovi* (kasimov, 1952) Odening, 1964; *C. dureni* (Vercammen- Grandjean, 1960) Odening, 1964; *C. Morenoi* Odening, 1964 and *C. orientale* Faust, 1966.

The above mentioned species are reported from various avian hosts and almost from all over the globe including one i.e. *C. acuminatum* from India and Bulgaria.

Specific differences between the specimens recovered from the same host i.e. *Saxicoloides fulicata* and same locality i.e. from Bird market, Karachi, suggest that these are new to Science and the name *Conspicuum alykhani* is proposed.

The species name is in honor of Dr. Aly khan, Principal Scientific Officer and Director, Crop Diseases Research Institute, Southern Zone Agricultural Research Centre, (Pakistan Agricultural Research Council) Karachi University Campus, Karachi, 75270 who has published several research papers dealing with Plant and Animal Parasites and has prepared several 'Patents' for control of Plant parasitic nematodes in Pakistan.

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Table 1. Comparative measurements of two new species of the genus *Conspicuum* (Bhalerao, 1936) Shtrom, 1940 recovered from *Saxicoloides fulicata* in Karachi, Sindh.

Host: *Saxicoloides fulicata*	***Conspicuum fulicatensis* sp.n.**
Cuticle	Irregularly wavy
Body shape	Fusiform with sharp pointed posterior extremity
Number of specimens recovered	03
Body length	5.7−6.2 by 2.0-2.1 (2.0)
Body width	2.17−2.4 (2.2)
Oral sucker	0.38−0.40 (0.39) by 0.39−0.4 (0.39)
Pharynx	0.09−0.10 (0.09) by 0.10-0.13 (0.11)
Esophagus	0.39−0.40 (0.39) by 0.11−0.14 (0.12)
	0.49-0.53 (0.51) by 0.57−0.58(0.57)
Ventral sucker	
Distance Between oral/ ventral sucker	1.23−1.24
Sucker: ratio	1: 0.77−0.73
Testis (Right)	0.18−0.20 (0.19) by 0.20−0.20 (0.20)
Testis (Left)	0.18−0.20 (0.19) by 0.27−0.28 (0.27)

Host: *Saxicoloides fulicata*	***Conspicuum fulicatensis* sp.n.**
Vitelline glands	Compact
Ovary	0.31−0.32 (0.31) by 0.10−0.11 (0.10)
Cirrus pouch	0.35−0.36 by 0.06−0.07
Position of genital opening	Below the Pharynx
Vitelline glands	Commence above the level of acetabulum and end below the posterior half of the body
Eggs	0.036−0.047 (0.20) by 0.02−0.03 (0.025

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