

A NEW SPECIES OF DIORCHIS (CESTODA) FROM COMMON TEAL (*ANAS CRECCA* L.)

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ABSTRACT

During December 2010, six cestodes were collected from the intestine of a bird, common teal (*Anas crecca* L.) from Hub Dam, district Lasbela, Balochistan, Pakistan. The cestode was named *Diorchis shaukati* sp.n. being characterized in having medium size body; scolex with eversible rostellum with four muscular suckers; immature segments fewer as compared to mature segments; mature segments wider than long; two testes rounded to oval in shape; cirrus sac strongly developed either long and bottle shaped or pyriform; cirrus sac is striped longitudinally; genital opening is unilateral; bilobate compact ovary; vitelline gland is single compact; vagina is simple, bottle shaped; uterus sac-like occupying entire medulla and eggs with filaments.

Keywords: Cestode, *Diorchis shaukati* sp.n., bird (*Anas crecca* L.), Balochistan, Pakistan

INTRODUCTION

Clerc (1902) erected the genus *Diorchis* with *D. acuminatus* as its type species in bird *Anas crecca* and *A. streptera*. Also in Anesiform birds (*Anas*, *Chaulelasmus*, *Fuligula*, *Nyroca*, *Mareca*, *Nettion*, etc. in Europe. Yamaguti (1959) listed thirty five species of the genus from different birds of Russia, Europe, India, China, New-Zealand, N. America, Philippines, Australia, France, etc.

Present species *Diorchis shaukati* sp.n. is described from common teal (*Anas crecca* L.) from Hub Dam, district Lasbela, Balochistan. This cestode genus is being reported for the first time from Pakistan.

MATERIALS AND METHODS

Six specimens of bird common teal (*Anas crecca* L.) were shot at Hub Dam, district Lasbela, Balochistan. The viscera were taken out and brought to the laboratory for detail examination of helminth parasite infections. Six cestodes were recovered from the intestine of a single bird. The cestodes were fixed in F.A.A. fixative under slight pressure of cover glass for 24 hours. Later the parasites were removed, washed well with 70 percent alcohol, stained with Mayer's carmalum, dehydrated in graded series of alcohol cleared in clove oil, rinsed with xylene and mounted permanently in Canada balsam. All measurements are in millimeters. Specimens are in possession of the senior author.

Diorchis shaukati n.sp.

(Figs. 1a–e)

Host: Common teal (*Anas crecca* L.)
Locality: Hub Dam, district Lasbela, Balochistan
Location: Intestine
Number of host examined: 6
Number of specimens recovered: Six from a single host

DESCRIPTION

Medium sized worms 50–55 mm long, 0.8–0.94 wide at fully mature segments while the width increases at the gravid segments. The scolex is provided by an eversible-rostellum which appears to be unarmed and four muscular suckers (Fig. a). The rostellum measures 0.01–0.011 by 0.072–0.076, the scolex is 0.18–0.2 by 0.02–0.021. The suckers are 0.09–0.1 by 0.065–0.07. The neck or the unsegmented portion is 0.14–0.16 by 0.08–0.085.

The immature segments are comparatively fewer than the mature segments, wider than long 0.07–0.08 by 0.2–0.5 (Fig. b). Mature segments are also wider than long 0.15–0.24 by 0.8–0.95. Internal segmentation is not obvious in the mature segments and also in the gravid segments.

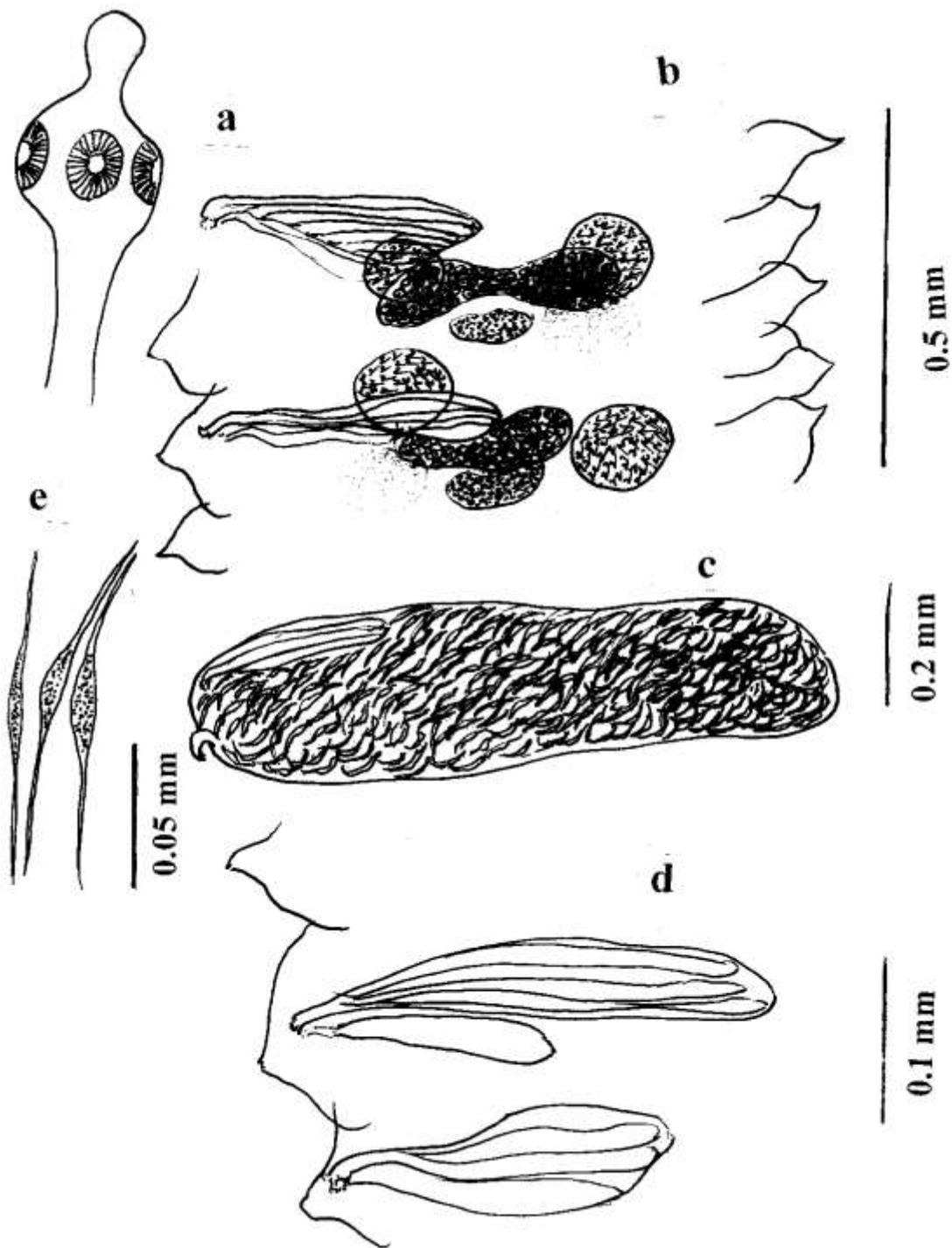


Fig. 1. *Diorchis shaukati* n.sp., a. Scolex, b. Mature segment; c. Gravid segment; d. Cirrus enlarged; e. Eggs enlarged.

The male reproductive system consists of two testes, rounded to oval in shape measuring 0.08–0.11 by 0.1–0.14. The cirrus sac is strongly developed, either long and bottle-shaped or pyriform 0.40–48 by 0.06–0.09 in size, each of the cirrus sac is typically striped longitudinally (Fig. d) in each of the mature segment, while it appears

persistent in the gravid segments (Fig. c). The genital openings are unilateral and open within the mature-segments in the lateral vicinity.

The female reproductive organs mainly consist of a bilobate, compact ovary, each lobe 0.07–0.08 while total width is 0.26–0.35, the ovary lies in the middle of the segment covering a major area laterally. The vitelline gland is single compact, transversely irregular, post ovarian 0.03–0.045 by 1–14. Vagina is simple, bottle-shaped, lies just below the cirrus sac 0.25–0.3 by 0.025–0.03, it opens into the genital opening alongwith the cirrus sac.

Uterus sac-like occupying entire medulla fully distended with typical eggs. The eggs vary in size, these are elongated, provided with thin, straight filament one on each pole of the egg, measuring 0.11–0.14 by 0.012–0.015.

DISCUSSION

The genus *Diorchis* Clerc, 1903 has earlier been reported in a duck from Pakistan, but the species could not be confirmed (Bilquees, 2009).

The present species comes closest to *D. longiovum* Schiller, 1953 but differs in shape of ovary which is trilobate to irregular in *D. longiovum* while it is bilobate in present species; the body size in the present species is smaller as compared to *D. longiovum* (85–100 mm long; maximum width 1.2 mm). The testes in present species are smaller as compared to *D. longiovum* (0.53) in diameter; the cirrus sac in present species is smaller in length as compared to *D. longiovum* (0.53). The rostellum in *D. longiovum* is wider (0.15) as compared to the present specimens. As reported by earlier Schiller (1953) the frequent loss of spines from suckers and cirri under certain conditions prior to or during preparation of specimens for study, was also observed in the present species. The present species is characterized by having a, ovary in fully mature segments strongly lobed, occupying 3/4th of the mid of segment. b, testes overlap the ovary in the mid of segment. c, cirrus sac is typically striped and does not reach up to mid of the segment. Keeping in view the specific differences the present forms are proposed to be new and designated as *D. shaukati* sp. n. The species is named in honour of Dr. S. Shahid Shaukat, Institute of Environmental Studies, University of Karachi, Pakistan.

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REFERENCES

- Bilquees, F.M. (2009). *Important helminth Parasites of Pakistan*. Federal Urdu University, Gulshan-e-Iqbal, Karachi. Pgs. 439.
- Clerc, W. (1902). Contribution a l'etude de la fauna helminthologique de L'ourol. Part I. *Zool. Anz.*, 25: 569–675.
- Schiller, E.V. (1953). Studies on the Helminth Fauna of Alaska. XIV. Some cestode parasites of Aleutian Teal (*Anas crecca* L.) with description of *Diorchis longiovum* n.sp. *Proc. Helm. Soc. Wash.*, 20: 7–10.
- Yamaguti, S. (1959). *Systema Helminthum*. Vol. II. The cestodes of vertebrate, Interscience Publishing Ltd., London, Pgs. 860.

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