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Short Communication

Studies on *Plagiorchis* (*Plagiorchis*) *tcheri* n. sp. from *Passer domesticus* from Buchpora, Srinagar, Kashmir

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Abstract

Large number of flukes belonging to the genus *Plagiorchis* Lühe, 1899 parasitising *Passer domesticus* were recovered from its intestine from Buchpora, Srinagar. These flukes differ from the species described so far from *Passer* and other avian hosts in the position of testes, in the extent of vitellaria, relative size of suckers and cirrus which does not coil round the ventral sucker and extends posteriorly to the equatcrial level, crossing the level of posterior margin of the ovary.

Key words : Buchpora, *Passer domesticus*, *Plagiorchis* (*Plagiorchis*) tcheri.

1. Description (all measurements in mm)

Body ovoid 1·6 long, 0·62 broad ; fore body broader than hind bcdy. Oral sucker well developed, subterminal, 3·5 long and 0·22 wide; ventral sucker smaller than oral sucker 0·22 in diameter; oesophagus very much reduced. Caeca terminates in hind body; testes diagonal entire and symmetrical ; both the testes more or less equal in size ; anterior testis located immediately behind equatorial level, 0·2 long and 0·15 wide. The anterior margin of the posterior testis crosses the level of posterior margin of anterior testis ; posterior testis 0·2 long and 0·16 wide. Cirrus pouch well developed, elongated, club-shaped 0·4 long and 0·07 wide, posterior end of cirrus pouch reaches the equatorial level and anteriorly opens at the genital pore, which is slightly sub-median and in front of acetabulum. Ovary 0·22 long and 0·15 wide, situated along with intestinal caeca near posterior margin of ventral sucker. Uterus extends anteriorly to the level of ventral sucker and posteriorly to the blind end of caeca. Eggs small, numerous 0·4 long, 0·2 wide. Vitellaria follicular, extending anteriorly to the level of blind end of caeca ; follicles do not join posterior to caeca or behind the testes. This is also true of the follicles in the pre-acetabular region.

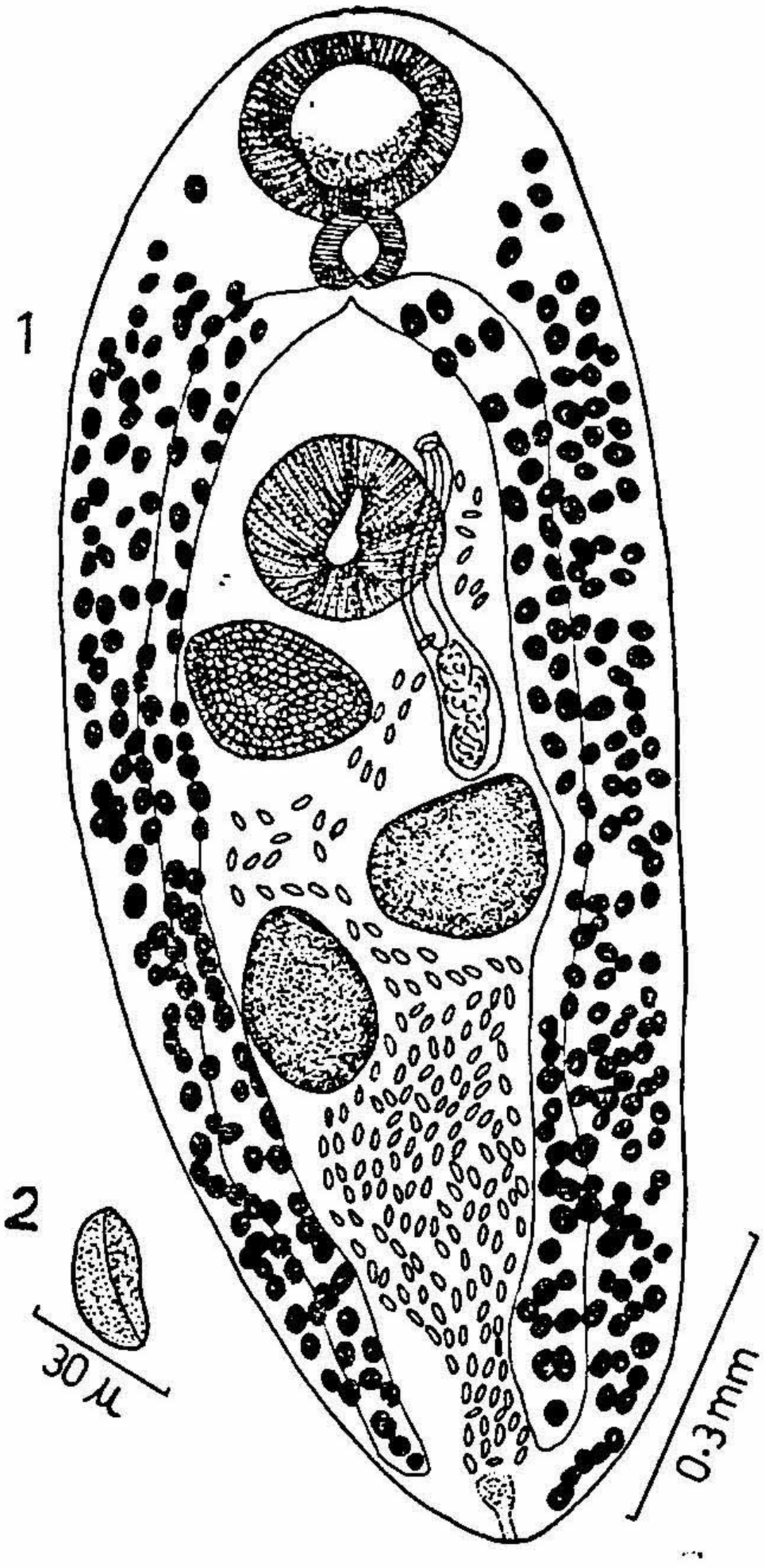

FIG. 1. Whole mount of the worm.

FIG. 2. Egg.

2. Discussion

Schulz and Skvorozov (1931) proposed 2 sub-genera for the genus *Plagiorchis*, namely *Plagiorchis* and *Multiglandularis*. Skrjabin and Antipin[1] also followed the same classification. Mehra[2] proposed a new genus *Neolopoderma* and Olsen[3] proposed another genus *Plagiorchoides* along with *Lepoderma* Looss[4], but both these genera were later placed as synonyms of the only ruled genus *Plagiorchis*. According to this classification the present form is assigned to the sub-genus *Plagiorchis*. Odening[5] reviewed his earlier 1959 classification of Plagiorchioita based on excretory system.

Out of the four species *viz*. *P. maculosus* (Rud., 1802), *P. marii* (Skrjabin, 1920), *P. cirratus* (Rud., 1802), *P. elagans* (Rud., 1802) Braun (1902) described from *passer domesticus*[6], last two species have been placed under the sub-genus *Multiglandularis*. When compared with the above four species, the present form is found to be quite distinct. In *P. maculosus* the vitellaria join behind testes and at the caecal level and anteriorly the follicles do not reach the level of the oral sucker. The cirrus pouch curves round the ventral sucker and terminates between the ventral sucker and the ovary. The differences with the present form are evident in respect of the anterior extent of the vitelline follicles to the level of oral sucker. Moreover, posteriorly, the follicles of the two sides are joining behind testes and the circus pouch does not coil round the ventral sucker and extends posteriorly to the equatorial level and crossing the level of posterior margin of the ovary. Similarly, differences are noted when the present form is compared with the other three species from *Passer*. In *Plagiorchis* (*Plagiorchis*) *marii*, vitellaria reach anteriorly only up to the level of ventral sucker. Ovary is distinctly smaller than testes and cirrus pouch extends posteriorly to the level of ovary.

In both *Plagiorchis maculosus* and *Plagiorchis elegans* vitellaria join in front of the ventral sucker. In *Plagiorchis* (*multiglandularis*) *cirratus*, the vitelline follicles are large. Cirrus pouch curves round between ventral sucker and ovary. In *Plagiorchis* (*Multiglandularis*) *elegans* the ventral sucker is very near the intestinal bifurcation and cirrus pouch does not reach the equatorial level.

From among other species of *Plagiorchis* described from other avian hosts the present form can be compared with three species, *viz*. *P.* (*P.*) *fullibornii*, *P.* (*P.*) *nisbethi* and *P.* (*P.*) *uhlwormii*.

In *P.* (*P.*) *fullibornii*[7] (Massino) the testes are behind equatorial level and vitellaria reach anteriorly to the level of pharynx but present form differs from it in the relative size of suckers, relative length and extent of cirrus pouch.

In *P.* (*P.*) *nisbethii* Nicoll[8] the posterior distribution of vitelline follicles is similar to that in the present form, but anteriorly the follicles hardly reach up to pharynx. Moreover, ovary is larger than both the testes. In *P.* (*P.*) *uhlwormii* Massino[9] the gonads are equal to that in the present form, but anteriorly the follicles extend to a level behind the intestinal bifurcation. Moreover, the cirrus pouch extends posteriorly only up to the middle level of ovary and ventral sucker is distinctly smaller than the oral sucker.

Four species of *Plagiorchis* are known from Indian birds. Out of these, *P. bulbulii* (Mehra, 1937) from the *Molpastes haemorrhous intermedius* and *P. russi* (Mehra, 1937) from *Casarca casarca* belong to the sub-genus *Plagiorchis* and the other two species, *P. casercii* and *P. ferruginus* (Mehra, 1937), are placed under the sub-genus *Multiglandularis*. The present form differs from *P.* (*P.*) *bulbulii* and *P.* (*P.*) *russi* in the

anterior extent of vitelline follicles and posterior extent of cirrus pouch and from the later two species of the sub-genus *Multiglandularis* in the vitelline follicles which do not join in front of ventral sucker.

When compared with other two species of the genus and sub-genus *Plagiorchis* the present form is again found to be distinct in one or the other morphological features of the extent and distribution of vitellinefollicles, relative size of gonads and shape and extent of cirrus pouch.

In view of these differences the present form is considered here to constitute a new species for which the name *Plagiorchis* (*Plagiorchis*) *tcheri* sp. is proposed after the local name of the host.

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