

ON REDESCRIPTION OF *NEOPRONOCEPHALUS TRIANGULARIS* MEHRA,
1932 (TREMATODA : PRONOCEPHALIDAE) WITH DISCUSSION
ON THE SYNONYMY OF *N. KACHUGAI* JAHAN, 1970

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ABSTRACT

Neopronocephalus triangularis Mehra, 1932 has been redescribed and recorded from the new host species, *Kachuga sylhetensis* (Jerdon) and *K. tectum tentoria* (Gray). Some variations from the original description have been recorded. *Neopronocephalus kachugai* Jahan, 1970 has been considered a synonym of *N. triangularis*.

INTRODUCTION

Three hundred and thirty seven specimens of *Neopronocephalus triangularis* Mehra, 1932 were recovered from the intestines of a number of varied fresh-water chelonians collected from several localities in India. In view of the intraspecific variations, this species is being redescribed in brief, supplementing the original description. All measurements, taken from ten flattened permanent preparations of the specimens, are in millimeters.

Neopronocephalus triangularis Mehra, 1932

Body transparent white in live condition with somewhat triangular anterior extremity ending bluntly; posterior end truncated or rounded, thickened due to aggregation of parenchymatous cells (verified from sagittally cut sections) and not muscular in nature as interpreted by Mehra (1932); 1.361-1.771 long by 0.278-0.621 maximum wide. Collar highly muscular, complete dorsally and incised midventrally, muscle bands arranged in two groups—half of them concentrically arranged and curving outwards towards ventral surface and the rest half arranged in a similar fashion towards the dorsal; gland cells aggregated in collar region. Oral sucker 0.049 - 0.09 × 0.065 - 0.114. Oesophagus 0.221 - 0.319 long, bifurcating 0.264-0.410 behind anterior end of body. Caeca turning inwards in testicular region and then again diverging and continuing posteriorly, terminating far in front of posterior end of body. Excretory system V- or Y-shaped, vesicle of variable shape (with very small stem when V-shaped) excretory vessels running anteriorly up to intestinal fork excretory pore at posterior end, terminal and not dorsal as described by Mehra, (1932) Testes oval, spherical or irregular in shape, symmetrically placed, right testis 0.082 - 0.205 × 0.057 - 0.183 and the left 0.082 - 0.164 × 0.049 - 0.18.

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Vesicula seminalis coiled. Cirrus sac $0.229 - 0.3001 \times 0.049 - 0.114$. Cirrus present. Genital pore in level with or a little behind intestinal fork, close and outer to left caecum. Ovary irregular or spherical, $0.065 - 0.114 \times 0.044 - 0.139$, lying to a little right of median line. Mehlis' gland $0.065 - 0.114 \times 0.098 - 0.147$, situated behind ovary. Uterus highly convoluted, full of eggs. Metraterm small, surrounded by a mass of gland cells; its extreme distal end which separately opens into the common genital atrium is highly muscular so as to give a sphincter-like appearance. Vitellaria post-testicular, may overlap the caeca at places, follicles 11-16 on left side and 11-15 on the right. Eggs filamentous, $0.0192 - 0.026$ in length (excluding filaments) and $0.0102 - 0.016$ in breadth.

Hosts : *Kachuga tectum tentoria* (Gray),
Kachuga sylhetensis (Jerdon),
Lissemys punctata punctata Bonnaterra

Habitat : Intestine

Locality : Ropar (Punjab) and Lucknow (U. P.)

REMARKS

Besides minor variations in shape and size of the body and its organs, the authors have found the following deviations from the original description : the excretory pore is terminal (not dorsal) and the excretory vesicle is variable, V- to Y-shaped; the gonads are rounded, oval or irregular in contour and the genital ducts open into a shallow genital atrium which in turn opens to the outer surface. (Mehra, 1932 vaguely described the presence of separate genital pores in this species). Two more host species, *i. e.*, *Kachuga sylhetensis* (Jerdon) and *K. tectum tentoria* (Gray) have been reported for this parasite. Earlier Mehra had reported it from *K. dhongoka* from Allahabad (U. P.) and Gupta (1966), from *Geoclemys hamiltoni* from Ferozepore (Punjab).

Discussion on the synonymy of *Neopronocephalus kachugai* Jahan, 1970 with *N. triangularis* Mehra, 1932.

Jahan (1970) described a new species, *Neopronocephalus kachugai*, from the intestine of *Kachuga dhongoka* at Lucknow and distinguished it from *N. triangularis* Mehra, 1932 on the basis of the presence of receptaculum seminis and the extension of intestinal caeca behind the ovary. The presence of receptaculum seminis in *N. kachugai*, as reported by Jahan (1970), seems to be doubtful. The genus *Neopronocephalus* Mehra, 1932 is characterized by the absence of this structure. It appears that Jahan probably mistook Mehlis' gland for receptaculum seminis, since the former is very well developed in these flukes. (Her observations are based on the whole mounts of the flukes and not on the sections). Regarding the extension of the intestinal caeca, Jahan states that in *N. kachugai*, they terminate "upon level of vitellaria or a little posterior to them", *i. e.*, in level with the posterior border of the ovary. In *N. triangularis* also, the intestinal caeca terminate "at the middle limit of or posterior to the ovary" (Mehra, 1932).

In view of the foregoing discussion, the writers propose to synonymize *N. kachugai* with *N. triangularis*.

Jahan (1970) also regarded *N. gangeticus* Mehra, 1932 from *Kachuga dhongoka* from Allahabad (U. P.); *N. mehrai* Chatterji, 1963 from *Morenia ocellata* in Rangoon;

and *N. rotundus* Siddiqui, 1965 from *Cyclemys dentata* from Aligarh (U. P.) as synonymous with *N. triangularis*, since the distinguishing characters, namely the size and the shape of the body, shapes of the cephalic region, collar and ovary, the size of the oral sucker and that of the cirrus sac, and the number of the vitelline follicles, were found to be intraspecific variations only. The writers are in conformity with this synonymy.

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