colaimus is karyologically more primitive than its congeneric species.

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STUDIES ON TRYpanosoma Seenghali Var Nov Sophorae From Puntius Sophore (Ham)

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During our study on the protzoan parasites of fishes, specimens of Puntius sophore (Ham) were found infected with Trypanosoma, the haemoflagellate parasite. This forms the subject matter of the present communication. Lingard1 had reported trypanosomes from the blood of Indian freshwater fish Ophiocephalus striatus. Subsequently several trypanosomes have been described from various freshwater teleosts of Indian subcontinent.2-18 The present study is the first report that P. sophore found infected with Trypanosoma in the Indian subcontinent.

P. sophore (Ham), the host fish, were obtained from the pond of Mangalana (Nagore, Rajasthan). The blood smears were drawn on clean slides and air-dried and subsequently fixed in acetone free methyl alcohol and stained with Giemsa's stain. Observations were made under oil immersion lens. Figures of blood parasites

one of the karyotypes of the other two species. In the absence of G-banding data for T. melanopogon and T. longimanus, it is difficult to trace the chromosomes of T. saccoaimus involved in centric fusion. Under these conditions, it can only be concluded that T. sac-
drawn into fine points at the ends. The nucleus was distinct and in most of the trypanosomes it is posterior, a little away from the middle part of the body. Flagellum is distinctly long, whip-like and forms well-developed undulating membrane with four to six folds. The kinetoplast is small and rounded, located slightly of the posterior end of the cell body. The cytoplasm is stained light blue with Giemsa's stain and granulated. No divisional stage of this monomorphic parasite was observed.

The trypanosome under discussion resembles in many respects with *T. seenghali*\(^1\). It is shown statistically by graphical presentation (figure 10). The comparative graphical presentation of morphometric measurements of both trypanosomes reveal the degree of resemblance in various aspects of morphometrics. The graphs have been plotted considering various factors, i.e., the minimum, the maximum and the mean values of different morphometric measurements of two trypanosomes. Dotted line represents the mean line of the particular morphological character and the two such mean lines of same characters of two trypanosomes show the degree of resemblance in morphometrics through their parallality.

A high degree of resemblance is seen in the total body length and width and the distance of the nucleus from flagellar end. The length of the body and free flagella, the long axis of the nucleus, the diameter of the kinetoplast and post-kinetoplast distance show median degree of resemblance while the width of the undulating membranes and short axis of the nucleus show least degree of resemblance in morphometrics of two trypanosomes.

A variety of fish trypanosome, *T. danilewskyi* var *saccobranchi* was described by Qadri\(^6\) in *Saccobranchus fossilis*, a fish from India. The trypanosome which he described shows resemblance in many respects, except in dimensions with *T. danilewskyi* (Lav. and Mesn). Similarly the trypanosome under discussion is now reported as a new variety of *T. seenghali*\(^1\) on account of the following factors. Both the trypanosomes occupy two different fish hosts, they are geographically separated and the morphological and morphometrical resemblances are only of 30%. A sub-species is valid if 75% or more of any population can be separated from the other population. In view of these, it is felt that the species under discussion can be described as a new variety, *T. seenghali* var nov *sophorae* after its hosts name *Funtius sophore* (Ham).

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**Figure 10.** Comparative degree of resemblance between two trypanosomes.

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