Re-description of *Eubothrium vittevitellatus* Mamaev, 1968 (Cestoda: Pseudophyllidea) from sand fish (*Trichodon trichodon* Tilesius) in Kamchatka Bay with an assessment of its distribution

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Abstract

*Eubothrium vittevitellatus* is re-described with particular attention being paid to scolex characters seen by scanning electron microscopy in material obtained from the intestines of the sand fish (*Trichodon trichodon*) from Kamchatka Bay. It is confirmed as a valid species distinguishable from others in the genus by the combined characters of scolex shape, muscle arrangement and position of vitelline follicles. Peculiarities in the distribution and specificity of the species of *Eubothrium* highlighted by *E. vittevitellatus* are discussed.

Identification

The identification of specimens of *Eubothrium* presented problems until the demonstration by Andersen (1979) that scolex characters viewed by scanning electron microscopy (SEM) could be used in species discrimination. Using this technique, Andersen & Kennedy (1983) confirmed the value of the scolex shape as a specific character and partially re-described six of the then nine existing species. *E. tulipai*, a new, tenth, species, was subsequently described by Ching & Andersen (1983). Re-description of the remaining three species, however, has had to await the obtention of suitable, or indeed any, material. Included amongst these species was *E. vittevitellatus* Mamaev, 1968. This species does not appear to have been found since its initial discovery, and its description by Protasova (1977) is essentially a repeat of that of Mamaev (1968), based upon conventional light microscopy. When material of this species was made available to the authors by the courtesy of Dr Yu. V. Kurochkin, the opportunity was taken to examine it by SEM and to clarify some points in the original description. A re-description is, therefore, presented here, followed by a comparison with other species in the genus and a discussion of the peculiarities in specificity and distribution exhibited by species of *Eubothrium* and highlighted by *E. vittevitellatus*.

Results

The following account follows closely the format of Andersen & Kennedy (1983) in order to facilitate comparison with other species in the genus, and reference may be made to this for full details of methods and SEM procedure.

*Eubothrium vittevitellatus* Mamaev, 1968

*Line drawings*

Mamaev, 1968; Protasova, 1977, Fig. 76.
Figs. 1-3. SEM views of the scolex of *E. vittevitellatus* showing shape of bothria and apical disc. Scale bars, 100 μm.