

## Amphistome acetabular types: an amendment to the *duplicitestorum* acetabular type of Näsmark (1937)

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### Abstract

The *duplicitestorum* acetabular type of Näsmark (1937) is amended to include the presence of the median exterior circular muscle series.

### Introduction

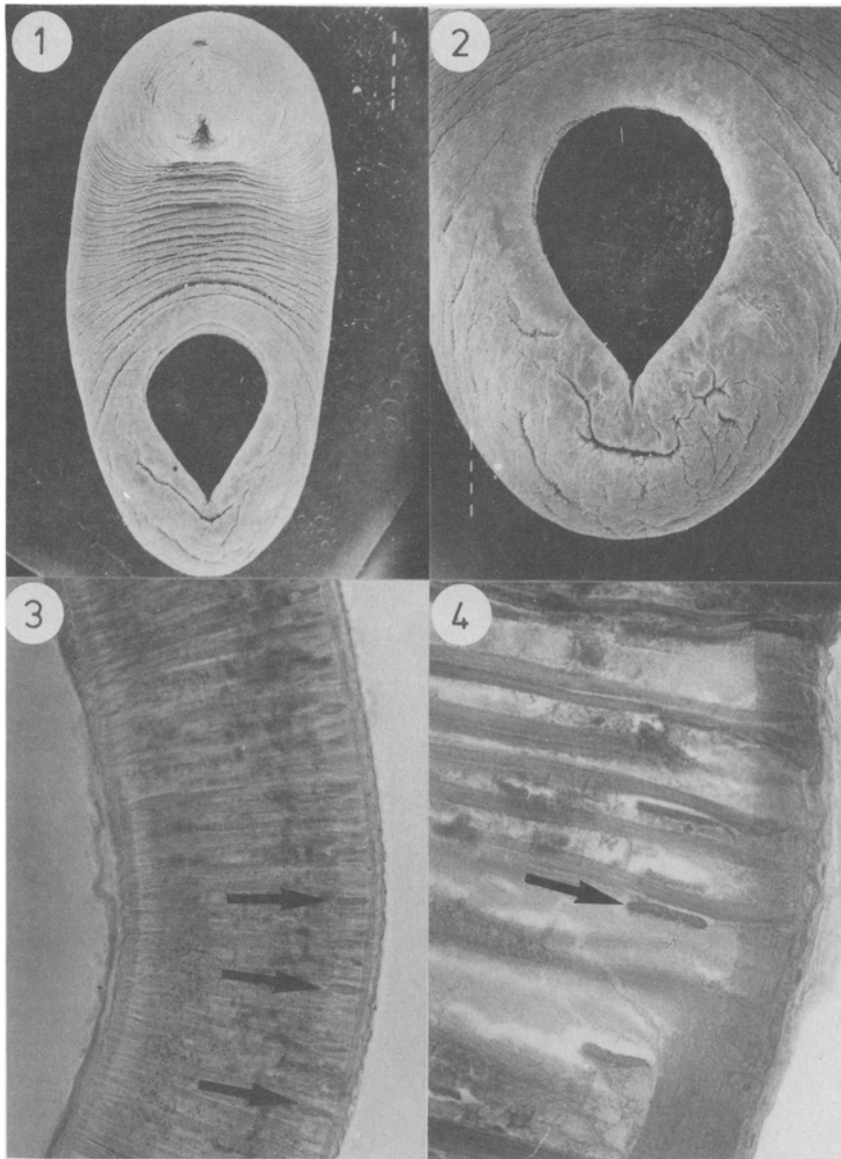
The *duplicitestorum* acetabular type for paramphistomoid trematodes was described by Näsmark (1937) for the acetabulum of *Gigantocotyle duplicitestorum* Näsmark, 1937 from *Hippopotamus amphibius* in the Sudan and Uganda. It was characterized by a divided dorsal exterior circular (d.e.c.) muscle series, with larger and more numerous muscle units in the d.e.c.2 group than in the d.e.c.1 group. This is the reverse of the pattern more commonly encountered in which the d.e.c.1 units are usually larger and more numerous. The dorsal interior circular (d.i.c.), ventral interior circular (v.i.c.) and ventral exterior circular (v.e.c.) series were undivided and both ventral series were poorly developed in relation to the size of the acetabulum. Näsmark (1937) did not include the median exterior circular (m.e.c.) series in his description of this or any other acetabular type, possibly because he did not consider it to be of any taxonomic value. Eduardo (1982, 1984) reported the presence of this series in every acetabular type he examined, except for the *duplicitestorum* type. He (1982) amended the description of the type and used the absence of the m.e.c. series as one of several characteristics distinguishing this type from others. Examination of additional material of *G. duplicitestorum* has now shown that the m.e.c. series is present.

### Material and methods

The specimens examined were collected by Mr R. Jooste from *Hippopotamus amphibius* in Zimbabwe. Four were stained in aceto-alum carmine, cleared in clove oil and hand-sectioned in the vertical longitudinal plane, and two were serially wax-sectioned in the same plane and stained in haematoxylin and eosin. In addition, one hand-sectioned and five serially-sectioned specimens in the J.A. Dinnik collection at the CABI Institute of Parasitology were also examined.

### Results

In ventral view, the acetabulum is subterminal with a posterior notch (Figs 1, 2), the prominence of which varies according to the degree of muscle contraction. The m.e.c. series was present in all the specimens studied, although very inconspicuous and easily overlooked in some, consisting of about 30–47 irregularly spaced units (Figs 3–5). The *duplicitestorum* acetabular type can be described as: enormous, subterminal, posteriorly notched. Circular muscle series present: d.e.c. series divided, d.e.c.1 15–18 units, d.e.c.2 30–44 units, larger than d.e.c.1 units; d.i.c. series undivided, 37–50 units; v.e.c. series short, undivided, 12–17 units; v.i.c.



*Figs 1-4. Gigantocotyle duplicitestorum.* 1. Entire specimen, ventral view. 2. Acetabulum, ventral view. 3, 4. Acetabulum in sagittal section, median exterior circular muscle units arrowed.

series undivided, 36-49 units; m.e.c. series present, 30-47 units. Radial and exterior longitudinal series well developed; oblique units weak. Numbers of units per series given above are approximate.

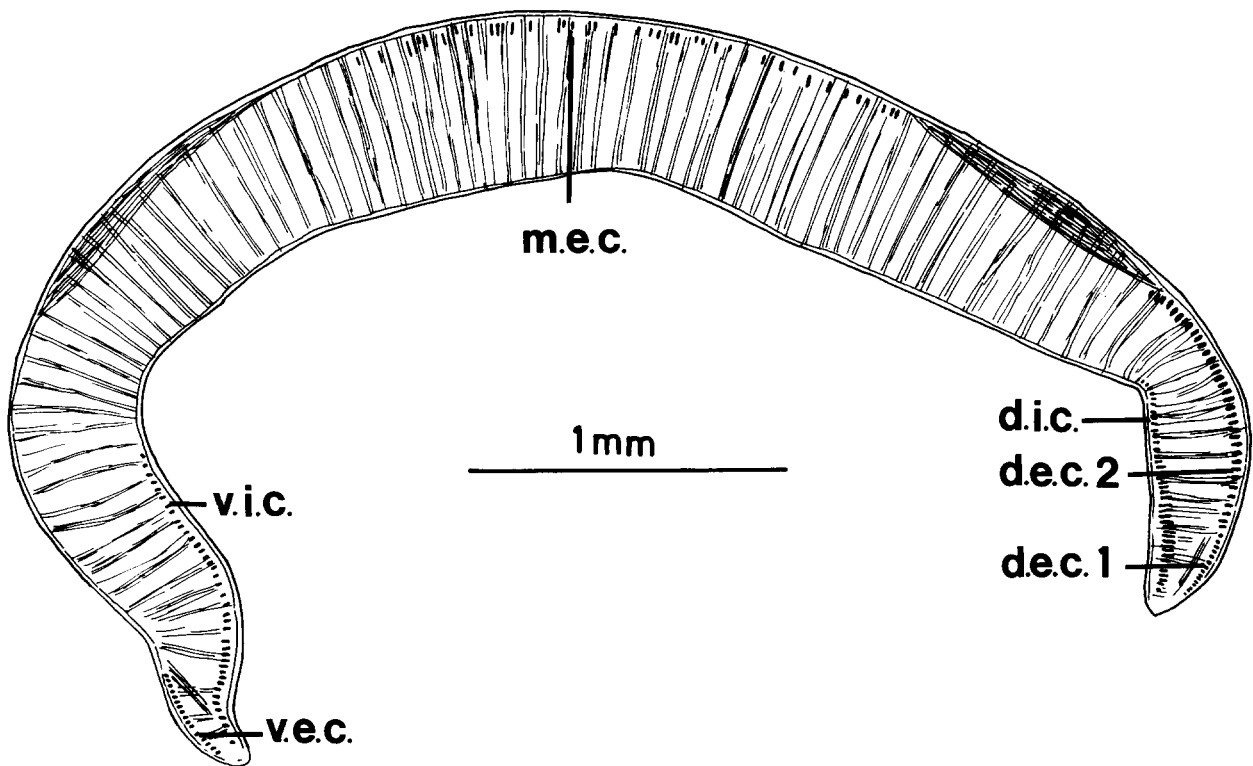


Fig. 5. *Gigantocotyle duplicitestorum*. Acetabulum in sagittal section (Abbreviations. d.e.c.1, d.e.c.2, dorsal exterior circular series, groups 1 and 2; d.i.c., dorsal interior circular series; v.e.c., ventral exterior circular series; v.i.c., ventral interior circular series; m.e.c., median exterior circular series).

## Discussion

The *duplicitestorum* acetabular type does not differ from other types by the absence of the m.e.c. series, but can still be distinguished from them by a combination of its enormous size, undivided v.e.c. series and the greater size and number of d.e.c.2 units as compared with d.e.c.1 units.

## References

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