

# A NEW SPECIES OF PHASCOLOSOMA (SIPUNCULA) FROM AUSTRALIA

by S. J. EDMONDS\*

## Summary

EDMONDS, S. J. (1985) A new species of *Phascolosoma* (Sipuncula) from South Australia. *Trans. R. Soc. S. Aust.* **109**(2), 43-44, 28 June, 1985.

A new species of sipunculan, *Phascolosoma kapalum* sp. nov. dredged from off the coast of New South Wales, is described. It is distinguished from other species of *Phascolosoma* by the shape of its introvert hook.

KEY WORDS: Sipuncula, *Phascolosoma kapalum* sp. nov., shape of introvert hooks.

## *Phascolosoma (phascolosoma) kapalum* sp. nov.

FIGS 1-2

*Phascolosoma* Leuckart, 1828; Fisher, 1952: 422; Stephen & Edmonds, 1972: 270.

*Type locality*: Stn K77-23-06, 33°40'S, 151°56'E, off coast of New South Wales; dredged at 710 m, during cruise of "Kapala", coll. P. Colman & D. Brown, 6.xii.1977.

*Type specimen*: Australian Museum Sydney: W 17004

*Paratype*: South Australian Museum: E 1694

### *Description*:

Trunk: Length 13-32 mm, maximum width near mid-region 4-7 mm. Subcylindrical to spindle-like and sometimes covered or partly so with coating of very fine particles of adherent mud. Thin walled. Longitudinal musculature grouped into 24-32 anastomosing bundles, usually visible externally.

Introvert: Slender and almost completely retracted in all specimens. Length  $\frac{1}{2}$ - $\frac{3}{4}$  trunk. Finger-like tentacles present which do not appear to surround mouth of dissected specimen. Numerous rows of single-pointed introvert hooks, 0.075-0.095 mm wide basally and with vertical height 0.070-0.090 mm. Hook with a lateral extension of its basal portion on side away from tip of hook. Hook uniformly brown except for clear streak (running from tip to mid-basal region), very narrow anteriorly but wider basally. Twelve or more basal bodies at base of hook on same side as tip.

Papillae: Most prominent at anterior and posterior regions of trunk and at base of introvert. Mostly hemispherical but may be bulbous, subclavate or conical. Central pore usually surrounded by 5-7 pigmented plates and sometimes elevated so that papillae appear mamillate. Largest hemispherical forms about 0.3 mm in diameter, subclavate forms 0.3-0.4 mm in height.

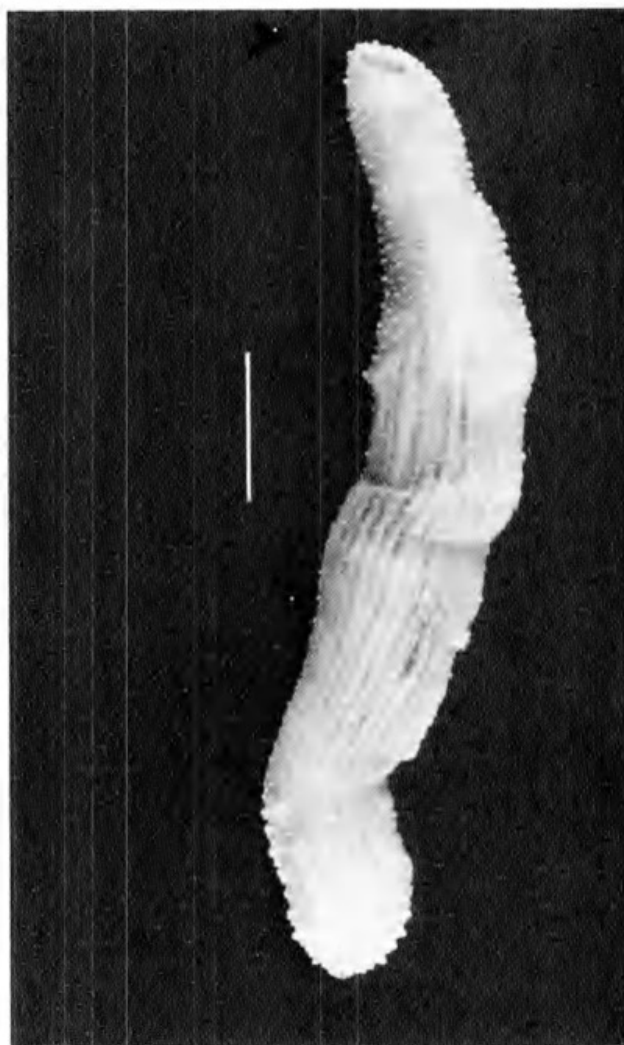


Fig. 1. *Phascolosoma kapalum* sp. nov., entire specimen (scale bar = 5 mm).

Refractor muscles: Four, consisting of a strong ventral pair arising from muscles 3-6, 4-7 or 5-8 in posterior third of trunk and a weaker dorsal pair more anteriorly from muscles 6-7, 6-9 or 7-9. Dorsal and ventral muscle on each side fused anteriorly.

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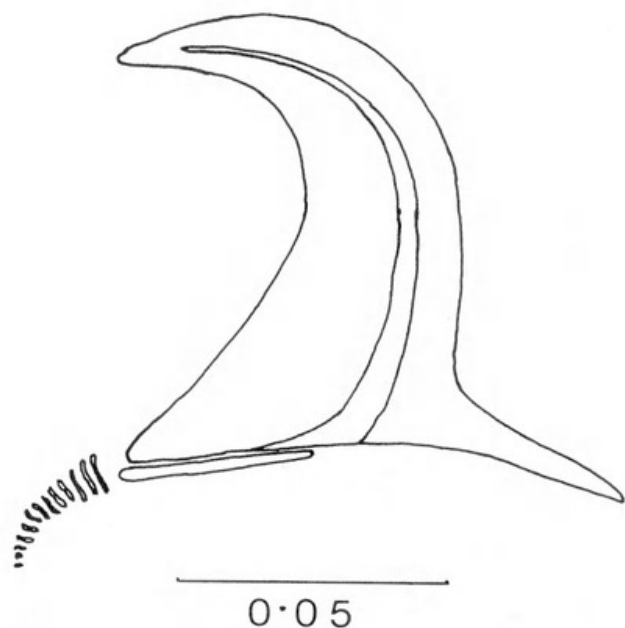


Fig. 2. *Phascolosoma kapalum* sp. nov., introvert hook (scale bar in mm).

Nephridia: Two; long, tubular and thin walled, extending to mid-region or posterior half of trunk fixed to body wall for about  $\frac{3}{4}$  length and opening to exterior at about same level as anus or just anterior to it.

Alimentary canal: Short oesophagus and long coiled intestine. One fastening muscle to anterior intestine. Spindle muscle, arising anteriorly from below anus, is fixed posteriorly. Intestinal caecum and wing muscle. Contractile vessel without villi. Brain with 2 eye spots.

#### *Systematic position*

This species of *Phascolosoma* falls in the subgenus *Phascolosoma* s.s. (Stephen & Edmonds 1972). It is distinguished from all other members of the sub-genus by the structure of its introvert hook, especially its basilateral extension. The species is not included in Edmonds (1980).

#### References

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